

# TEST REPORT

## CERTIFICATE OF CONFORMITY

**Standard:** 47 CFR FCC Part 15, Subpart E (Section 15.407)

**Report No.:** RFBBQZ-WTW-P23090412-2

**FCC ID:** PY323400613

**Product:** BE9400 Tri-Band PoE 2.5G Insight Managed WiFi 7 Access Point

**Brand:** NETGEAR

**Model No.:** WBE710

**Series Model:** WBE718 (Refer to item 3.1 for more details)

**Received Date:** 2023/10/4

**Test Date:** 2024/3/16 ~ 2024/5/10

**Issued Date:** 2024/5/17

**Applicant and Manufacturer:** NETGEAR, INC.

**Address:** 350 East Plumeria Drive San Jose CA 95134

**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch  
Lin Kou Laboratories

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**FCC Registration /** 788550 / TW0003

**Designation Number:**

**Approved by:** \_\_\_\_\_

*Jeremy Lin*

**Date:** \_\_\_\_\_

2024/5/17

Jeremy Lin / Project Engineer

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Prepared by : Vera Huang / Specialist



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## Release Control Record

Issue No.	Description	Date Issued
RFBBQZ-WTW-P23090412-2	Original Release	2024/5/17

## 1 Certificate

**Product:** BE9400 Tri-Band PoE 2.5G Insight Managed WiFi 7 Access Point

**Brand:** NETGEAR

**Test Model:** WBE710

**Series Model:** WBE718

**Sample Status:** Engineering sample

**Applicant and Manufacturer:** NETGEAR, INC.

**Test Date:** 2024/3/16 ~ 2024/5/10

**Standard:** 47 CFR FCC Part 15, Subpart E (Section 15.407)

**Measurement procedure:** ANSI C63.10-2013

KDB 987594 D02 U-NII 6 GHz EMC Measurement v02r01

KDB 789033 D02 General UNII Test Procedure New Rules v02r01

KDB 662911 D01 Multiple Transmitter Output v02r01

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

## 2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
Clause	Test Item	Result	Remark
15.407(a)(5)	Maximum RF Output Power	Pass	Meet the requirement of limit.
15.407(a)(5)	Maximum Power Spectral Density	Pass	Meet the requirement of limit.
15.407(a)(10)	Emission Bandwidth	Pass	Meet the requirement of limit.
---	Occupied Bandwidth	-	Reference only.
15.407(b)(9)	AC Power Conducted Emissions	Pass	Minimum passing margin is -16.97 dB at 0.15400 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -11.7 dB at 775.93 MHz
15.407(b)(6) 15.407(b)(10)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.1 dB at 7250.00 MHz
15.407(b)(7)	In-Band Emission Mask	Pass	Meet the requirement of limit.
15.407(d)(6)	Contention-based Protocol	Pass	Meet the requirement of limit.
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is ipex(MHF) not a standard connector.

### Notes:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. Per TCBC notice, FCC allows 99% BW measurements for Wi-Fi 320MHz BW mode instead of Emission Bandwidth.

### 2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Specification	Expanded Uncertainty (k=2) (±)
Maximum RF Output Power	1 GHz ~ 18 GHz	2.29 dB
Maximum Power Spectral Density	1 GHz ~ 18 GHz	2.29 dB
Occupied Bandwidth	-	72 Hz
Frequency Stability	-	0.176 ppm
AC Power Conducted Emissions	9 kHz ~ 30 MHz	2.88 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3.59 dB
	30 MHz ~ 1 GHz	3.64 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	2.29 dB
	18 GHz ~ 40 GHz	2.29 dB

The other instruments specified are routine verified to remain within the calibrated levels, no measurement uncertainty is required to be calculated.

### 2.2 Supplementary Information

There is not any deviation from the test standards for the test method, and no modifications required for compliance.

### 3 General Information

#### 3.1 General Description of EUT

Product	BE9400 Tri-Band PoE 2.5G Insight Managed WiFi 7 Access Point
Brand	NETGEAR
Test Model	WBE710
Series Model	WBE718
Model Difference	Refer to note
Status of EUT	Engineering sample
Power Supply Rating	Refer to note
Modulation Type	64QAM, 16QAM, QPSK, BPSK for OFDM 1024QAM for OFDMA in 11ax mode 4096QAM for OFDMA in 11be mode
Modulation Technology	OFDM, OFDMA
Transfer Rate	802.11a: up to 54 Mbps 802.11ax: up to 2401.9 Mbps 802.11be: up to 5764 Mbps
Operating Frequency	6.115 GHz ~ 6.415 GHz 6.425 GHz ~ 6.525 GHz 6.535 GHz ~ 6.865 GHz 6.875 GHz ~ 7.115 GHz
Number of Channel	802.11a, 802.11ax (HE20), 802.11be (EHT20): 51 802.11ax (HE40), 802.11be (EHT40): 25 802.11ax (HE80), 802.11be (EHT80): 12 802.11ax (HE160), 802.11be (EHT160): 6 802.11be (EHT320): 5
Output Power	6.115 GHz ~ 6.415 GHz : EIRP: 972.747 mW (29.88 dBm) 6.425 GHz ~ 6.525 GHz : EIRP: 966.051 mW (29.85 dBm) 6.535 GHz ~ 6.865 GHz : EIRP: 926.83 mW (29.67 dBm) 6.875 GHz ~ 7.115 GHz : EIRP: 897.429 mW (29.53 dBm)
Equipment Class	6ID: 15E 6 GHz Low-power indoor access point

Note:

1. All models are listed as below. Model WBE710 is the representative for final test.

Brand	Model	Difference
NETGEAR	WBE710	Same HW, only change model name from SW
	WBE718	

2. The EUT uses following support units.

AC Adapter 1	Brand	NETGEAR
	Model	ADS-40FPC-12 12030E
	Part Number	332-11699-01
	AC Input	100-240V ~ 50/60 Hz
	DC Output	12.0V 2.5A 30.0W
	DC Output Cable	1.76M / without core
	Plug	Changeable
	Manufacturer	Vietnam Honor High Tech Company Limited
AC Adapter 2	Brand	NETGEAR
	Model	ADS-40FPA-12 12030EPCU-L ADS-40FPA-12 12030EPC-L
	Part Number	332-11584-01
	AC Input	100-120V ~ 60Hz MAX 1.0A
	DC Output	12V 2.5A
	DC Output Cable	1.77M / without core
	Plug	US
	Manufacturer	Vietnam Honor High Tech Company Limited
AC Adapter 3	Brand	NETGEAR
	Model	2AED030FC
	Part Number	332-1171201
	AC Input	100-240V ~50- 60Hz MAX 1.0A
	DC Output	12.0V 2.5A 30.0W
	DC Output Cable	1.77M / without core
	Plug	Changeable
	Manufacturer	Channel Well Technology (Guangzhou) Co., Ltd
POE	Brand	NETGEAR
	Model	MS108UP
	DC Input	54V- 4.7A

\* After pretesting, Adapter 1 was the worst case and representative for final test.

3. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.



### 3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna Type	Connector Type	Frequency Range	Antenna Gain (dBi)	
			Chain 0	Chain 1
PIFA	ipex(MHF)	5925~6425 MHz	5.38	5.26
PIFA	ipex(MHF)	6425~6525 MHz	5.28	5.02
PIFA	ipex(MHF)	6525~6875 MHz	5.28	5.02
PIFA	ipex(MHF)	6875~7125 MHz	5.25	5.12

\* Detail antenna specification please refer to antenna datasheet and/or antenna measurement report.

2. The EUT incorporates a MIMO function:

6 GHz Band			
Modulation Mode	Beamforming Mode	Tx & Rx Configuration	
802.11a	Not Support	2TX	2RX
802.11ax (HE20)	Support	2TX (Nss 1 / Nss 2)	2RX
802.11ax (HE40)	Support	2TX (Nss 1 / Nss 2)	2RX
802.11ax (HE80)	Support	2TX (Nss 1 / Nss 2)	2RX
802.11ax (HE160)	Support	2TX (Nss 1 / Nss 2)	2RX
802.11be (EHT20)	Support	2TX (Nss 1 / Nss 2)	2RX
802.11be (EHT40)	Support	2TX (Nss 1 / Nss 2)	2RX
802.11be (EHT80)	Support	2TX (Nss 1 / Nss 2)	2RX
802.11be (EHT160)	Support	2TX (Nss 1 / Nss 2)	2RX
802.11be (EHT320)	Support	2TX (Nss 1 / Nss 2)	2RX

Note:

1. All of modulation mode support beamforming function except 802.11a modulation mode.
2. The EUT support Beamforming and CDD mode, therefore both mode were investigated and the worst case scenario was identified. The worst case data were presented in test report.
3. The modulation and bandwidth are similar for 802.11ax mode for 20 MHz (40 MHz, 80 MHz, 160MHz), and 802.11be mode for 20 MHz (40 MHz, 80 MHz, 160MHz, 320MHz), therefore the manufacturer will control the power for 802.11ax mode is the same as the 802.11be or lower than it and investigated worst case to representative mode in test report.
4. The EUT device modulation technique OFDMA does not support partial RUs (resource units) and channel puncturing/bandwidth reduction mechanisms.

### 3.3 Channel List

#### U-NII-5:

16 channels are provided for 802.11a, 802.11ax (HE20), 802.11be (EHT20):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
33	6115 MHz	37	6135 MHz	41	6155 MHz	45	6175 MHz
49	6195 MHz	53	6215 MHz	57	6235 MHz	61	6255 MHz
65	6275 MHz	69	6295 MHz	73	6315 MHz	77	6335 MHz
81	6355 MHz	85	6375 MHz	89	6395 MHz	93	6415 MHz

8 channels are provided for 802.11ax (HE40), 802.11be (EHT40):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
35	6125 MHz	43	6165 MHz	51	6205 MHz	59	6245 MHz
67	6285 MHz	75	6325 MHz	83	6365 MHz	91	6405 MHz

4 channels are provided for 802.11ax (HE80), 802.11be (EHT80):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
39	6145 MHz	55	6225 MHz	71	6305 MHz	87	6385 MHz

2 channels are provided for 802.11ax (HE160), 802.11be (EHT160):

Channel	Frequency	Channel	Frequency
47	6185 MHz	79	6345 MHz

1 channel is provided for 802.11be (EHT320):

Channel	Frequency
63	6265 MHz

#### U-NII-6:

5 channels are provided for 802.11a, 802.11ax (HE20), 802.11be (EHT20):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
97	6435 MHz	101	6455 MHz	105	6475 MHz	109	6495 MHz
113	6515 MHz						

3 channels are provided for 802.11ax (HE40), 802.11be (EHT40):

Channel	Frequency	Channel	Frequency	Channel	Frequency
99	6445 MHz	107	6485 MHz	*115	6525 MHz

1 channel is provided for 802.11ax (HE80), 802.11be (EHT80):

Channel	Frequency
103	6465 MHz

1 channel is provided for 802.11ax (HE160), 802.11be (EHT160):

Channel	Frequency
*111	6505 MHz

1 channel is provided for 802.11be (EHT320):

Channel	Frequency
*95	6425 MHz

**U-NII-7:**

17 channels are provided for 802.11a, 802.11ax (HE20), 802.11be (EHT20):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
117	6535 MHz	121	6555 MHz	125	6575 MHz	129	6595 MHz
133	6615 MHz	137	6635 MHz	141	6655 MHz	145	6675 MHz
149	6695 MHz	153	6715 MHz	157	6735 MHz	161	6755 MHz
165	6775 MHz	169	6795 MHz	173	6815 MHz	177	6835 MHz
181	6855 MHz						

8 channels are provided for 802.11ax (HE40), 802.11be (EHT40):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
123	6565 MHz	131	6605 MHz	139	6645 MHz	147	6685 MHz
155	6725 MHz	163	6765 MHz	171	6805 MHz	179	6845 MHz

5 channels are provided for 802.11ax (HE80), 802.11be (EHT80):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
*119	6545 MHz	135	6625 MHz	151	6705 MHz	167	6785 MHz
*183	6865 MHz						

2 channels are provided for 802.11ax (HE160), 802.11be (EHT160):

Channel	Frequency	Channel	Frequency
143	6665 MHz	175	*6825 MHz

2 channels are provided for 802.11be (EHT320):

Channel	Frequency	Channel	Frequency
*127	6585 MHz	*159	6745 MHz

**U-NII-8:**

13 channels are provided for 802.11a, 802.11ax (HE20), 802.11be (EHT20):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
185	6875 MHz	189	6895 MHz	193	6915 MHz	197	6935 MHz
201	6955 MHz	205	6975 MHz	209	6995 MHz	213	7015 MHz
217	7035 MHz	221	7055 MHz	225	7075 MHz	229	7095 MHz
233	7115 MHz						

6 channels are provided for 802.11ax (HE40), 802.11be (EHT40):

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
187	6885 MHz	195	6925 MHz	203	6965 MHz	211	7005 MHz
219	7045 MHz	227	7085 MHz				

2 channels are provided for 802.11ax (HE80), 802.11be (EHT80):

Channel	Frequency	Channel	Frequency
199	6945 MHz	215	7025 MHz

1 channel is provided for 802.11ax (HE160), 802.11be (EHT160):

Channel	Frequency
207	6985 MHz

1 channel is provided for 802.11be (EHT320):

Channel	Frequency
*191	6905 MHz

Note: \* mean these are straddle channels.

### 3.4 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	EUT can be used in the following ways: X-axis / Y-axis / Z-axis. Pre-scan these ways and find the worst case as a representative test condition.
Worst Case:	Y-axis

Following channel(s) was (were) selected for the final test as listed below:

Test Item	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
Maximum RF Output Power	802.11a	CDD	33, 61, 93, 97, 105, 113, 117, 149, 181, 185, 209, 229, 233	BPSK	6Mb/s
	802.11be (EHT20)	Beamforming(2T1S) / Beamforming(2T2S)	33, 61, 93, 97, 105, 113, 117, 149, 181, 185, 209, 229, 233	BPSK	MCS0
	802.11be (EHT40)	Beamforming(2T1S) / Beamforming(2T2S)	35, 59, 91, 99, 107, 115, 123, 155, 179, 187, 211, 227	BPSK	MCS0
	802.11be (EHT80)	Beamforming(2T1S) / Beamforming(2T2S)	39, 55, 87, 103, 119, 135, 151, 167, 183, 199, 215	BPSK	MCS0
	802.11be (EHT160)	Beamforming(2T1S) / Beamforming(2T2S)	47, 79, 111, 143, 175, 207	BPSK	MCS0
	802.11be (EHT320)	Beamforming(2T1S) / Beamforming(2T2S)	63, 95, 127, 159, 191	BPSK	MCS0
Maximum Power Spectral Density / Emission Bandwidth / In-Band Emission Mask / Occupied Bandwidth	802.11a	CDD	33, 61, 93, 97, 105, 113, 117, 149, 181, 185, 209, 229, 233	BPSK	6Mb/s
	802.11be (EHT20)	Beamforming(2T1S) / Beamforming(2T2S)	33, 61, 93, 97, 105, 113, 117, 149, 181, 185, 209, 229, 233	BPSK	MCS0
	802.11be (EHT40)	Beamforming(2T1S) / Beamforming(2T2S)	35, 59, 91, 99, 107, 115, 123, 155, 179, 187, 211, 227	BPSK	MCS0
	802.11be (EHT80)	Beamforming(2T1S) / Beamforming(2T2S)	39, 55, 87, 103, 119, 135, 151, 167, 183, 199, 215	BPSK	MCS0
	802.11be (EHT160)	Beamforming(2T1S) / Beamforming(2T2S)	47, 79, 111, 143, 175, 207	BPSK	MCS0
	802.11be (EHT320)	Beamforming(2T1S) / Beamforming(2T2S)	63, 95, 127, 159, 191	BPSK	MCS0

Test Item	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
Frequency Stability	802.11a	CDD	33	unmodulated	-
Contention-based Protocol	802.11be (EHT20)	Normal	45, 105, 149, 209	BPSK	MCS0
	802.11be (EHT320)	Normal	31, 95, 127, 191	BPSK	MCS0
AC Power Conducted Emissions	802.11be (EHT320)	Beamforming(2T1S)	63	BPSK	MCS0
Unwanted Emissions below 1 GHz	802.11be (EHT320)	Beamforming(2T1S)	63	BPSK	MCS0
Unwanted Emissions above 1 GHz	802.11a	CDD	33, 61, 93, 97, 105, 113, 117, 149, 181, 185, 209, 229, 233	BPSK	6Mb/s
	802.11be (EHT20)	Beamforming(2T1S) / Beamforming(2T2S)	33, 61, 93, 97, 105, 113, 117, 149, 181, 185, 209, 229, 233	BPSK	MCS0
	802.11be (EHT40)	Beamforming(2T1S) / Beamforming(2T2S)	35, 59, 91, 99, 107, 115, 123, 155, 179, 187, 211, 227	BPSK	MCS0
	802.11be (EHT80)	Beamforming(2T1S) / Beamforming(2T2S)	39, 55, 87, 103, 119, 135, 151, 167, 183, 199, 215	BPSK	MCS0
	802.11be (EHT160)	Beamforming(2T1S) / Beamforming(2T2S)	47, 79, 111, 143, 175, 207	BPSK	MCS0
	802.11be (EHT320)	Beamforming(2T1S) / Beamforming(2T2S)	63, 95, 127, 159, 191	BPSK	MCS0

### 3.5 Duty Cycle of Test Signal

#### NSS1

**802.11a:** Duty cycle = 1.985 ms / 1.99 ms x 100% = 99.7%

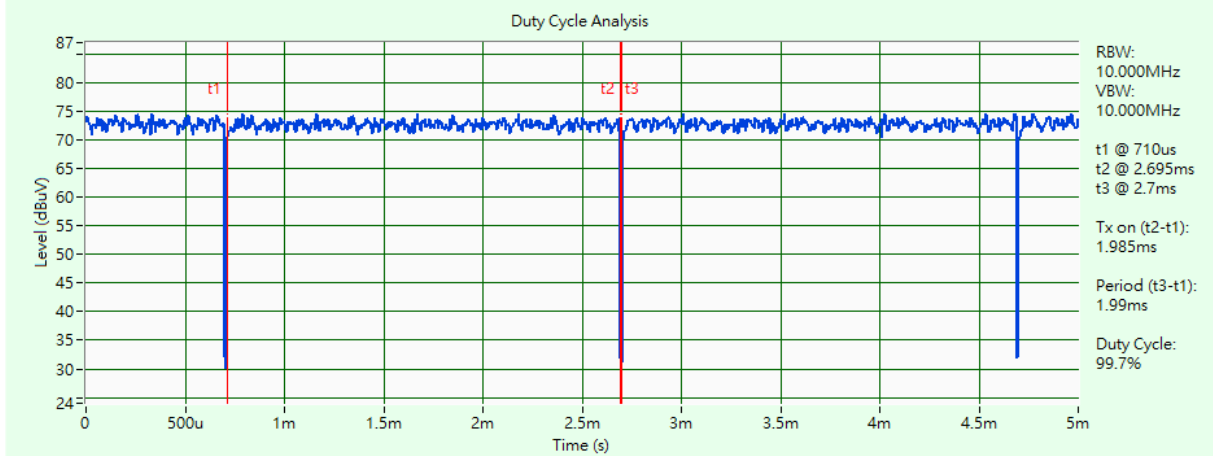
**802.11be (EHT20):** Duty cycle = 5.16 ms / 5.235 ms x 100% = 98.6%

**802.11be (EHT40):** Duty cycle = 4.536 ms / 4.596 ms x 100% = 98.7%

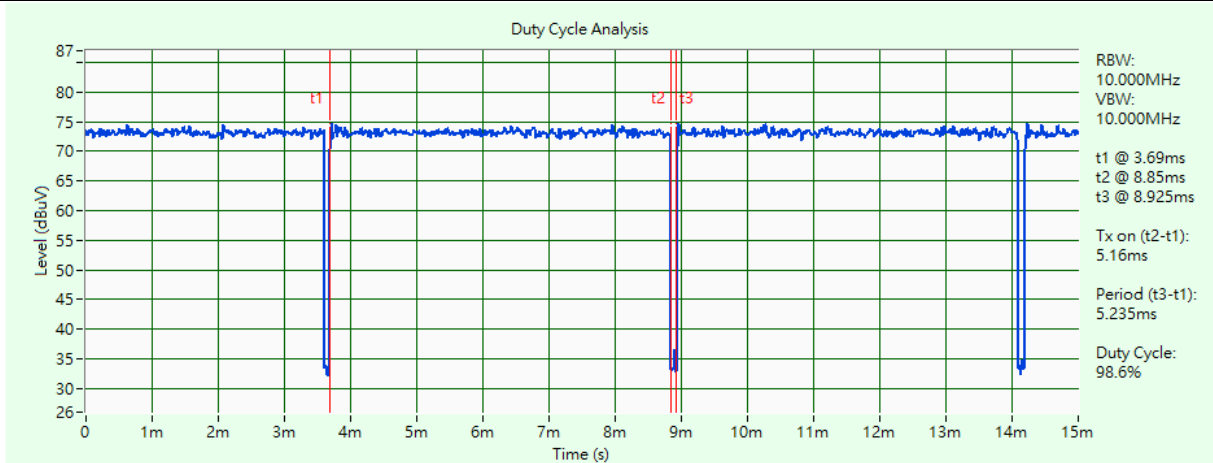
**802.11be (EHT80):** Duty cycle = 5.415 ms / 5.52 ms x 100% = 98.1%

**802.11be (EHT160):** Duty cycle = 5.205 ms / 5.265 ms x 100% = 98.9%

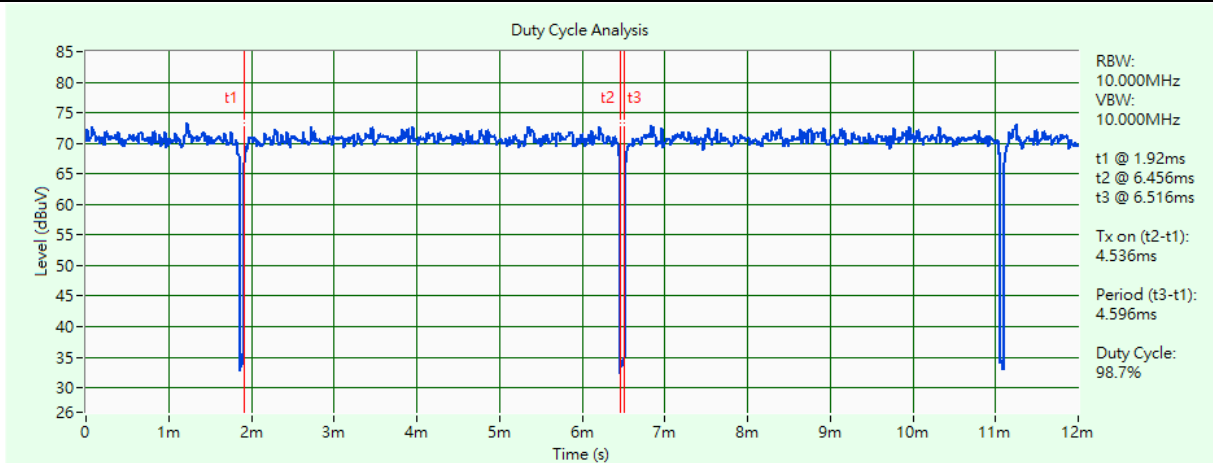
**802.11be (EHT320):** Duty cycle = 3.19 ms / 3.23 ms x 100% = 98.8%



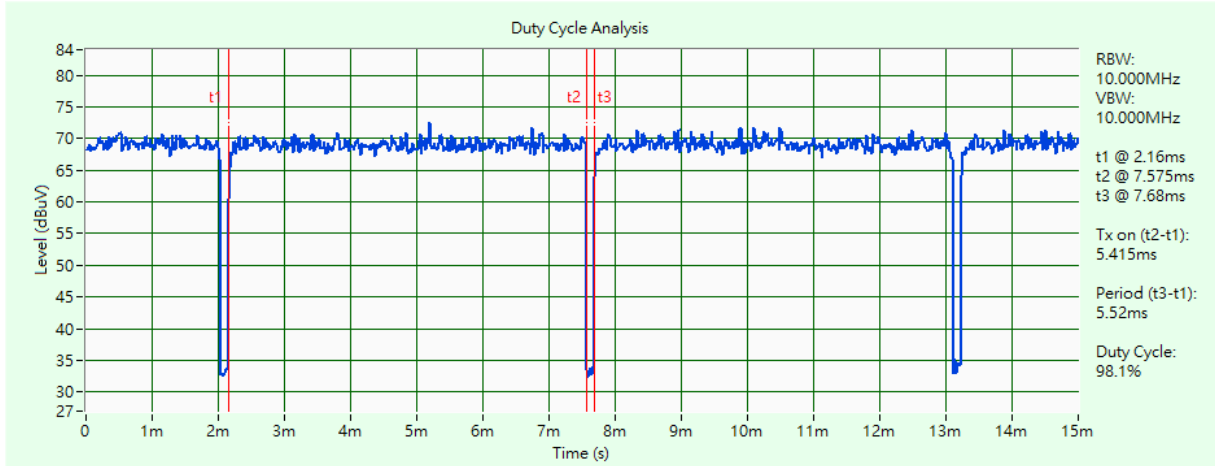
802.11a



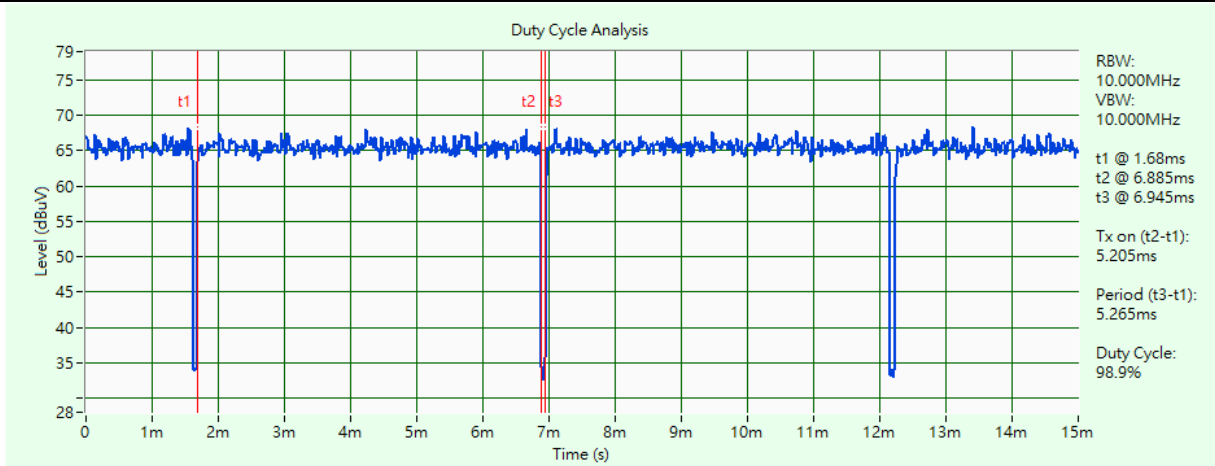
802.11be (EHT20)



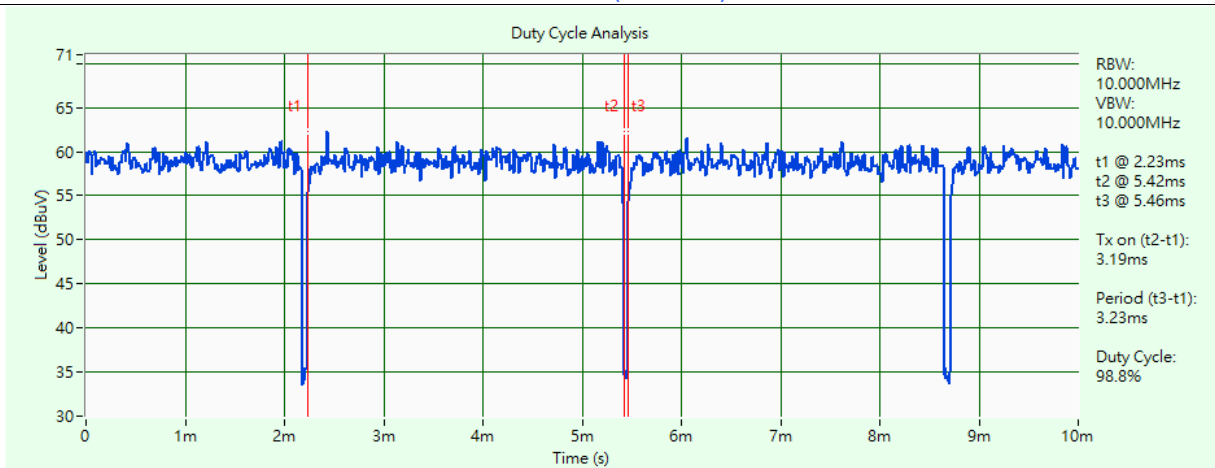
802.11be (EHT40)



802.11be (EHT80)



802.11be (EHT160)



802.11be (EHT320)



### NSS2

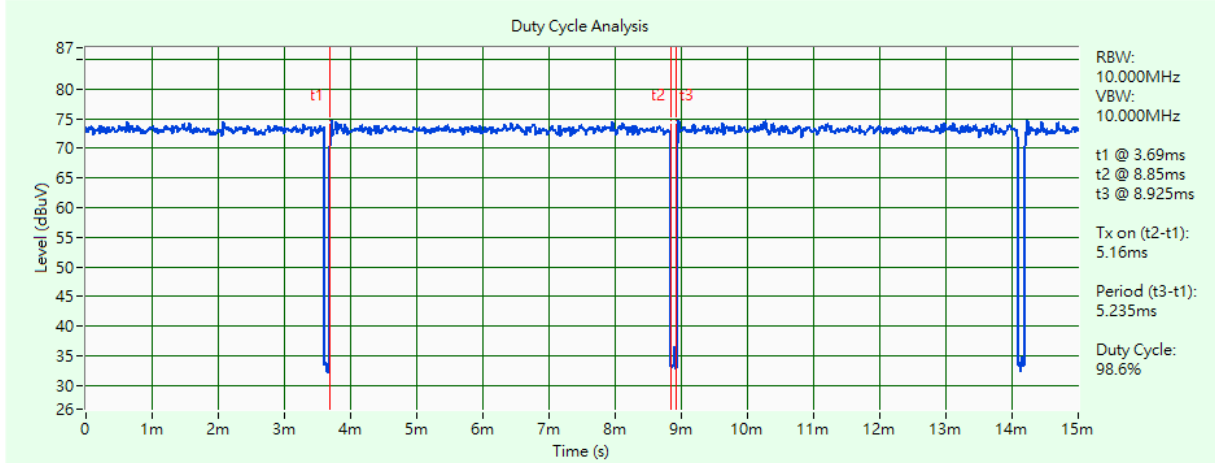
802.11be (EHT20): Duty cycle = 5.16 ms / 5.235 ms x 100% = 98.6%

802.11be (EHT40): Duty cycle = 4.536 ms / 4.596 ms x 100% = 98.7%

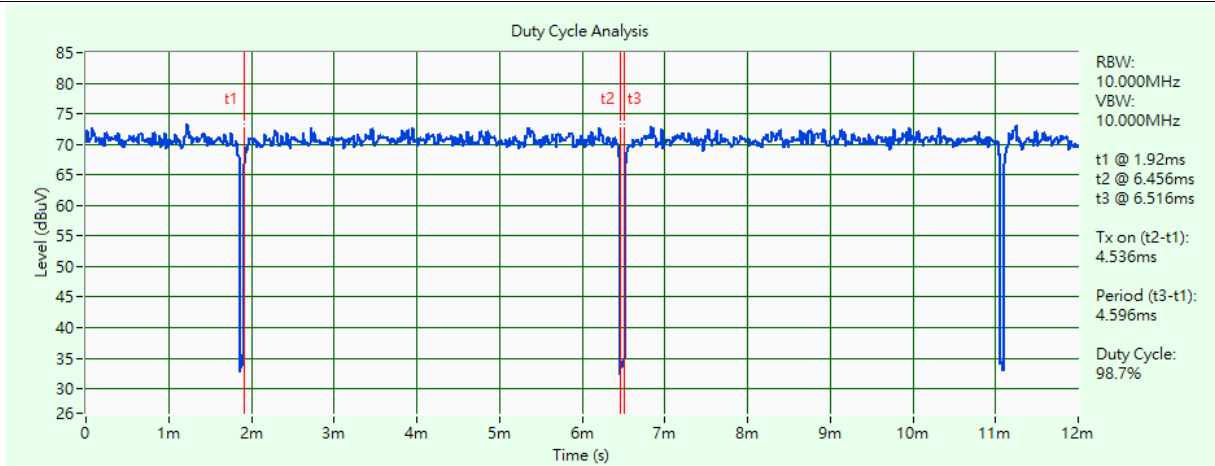
802.11be (EHT80): Duty cycle = 5.415 ms / 5.52 ms x 100% = 98.1%

802.11be (EHT160): Duty cycle = 5.205 ms / 5.265 ms x 100% = 98.9%

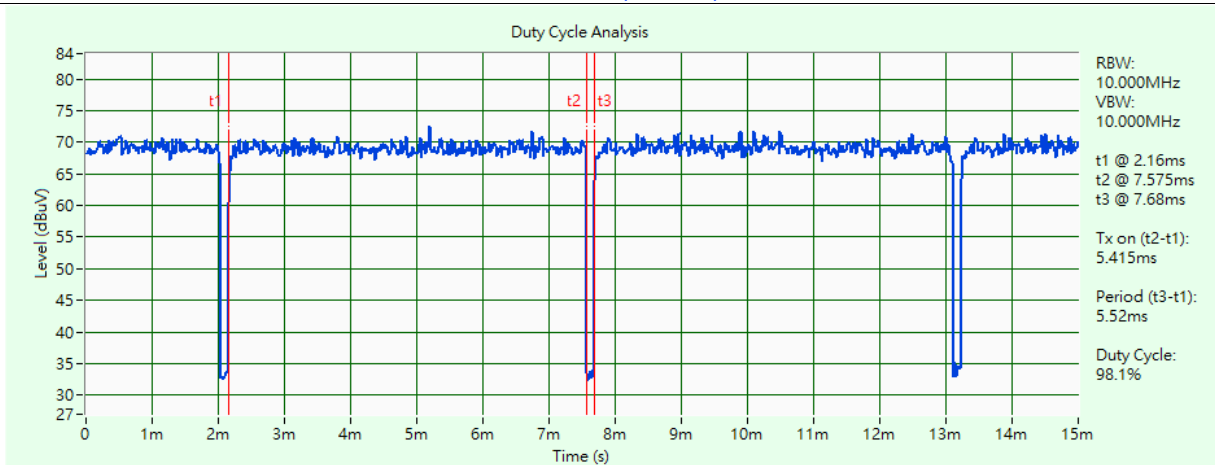
802.11be (EHT320): Duty cycle = 3.19 ms / 3.23 ms x 100% = 98.8%



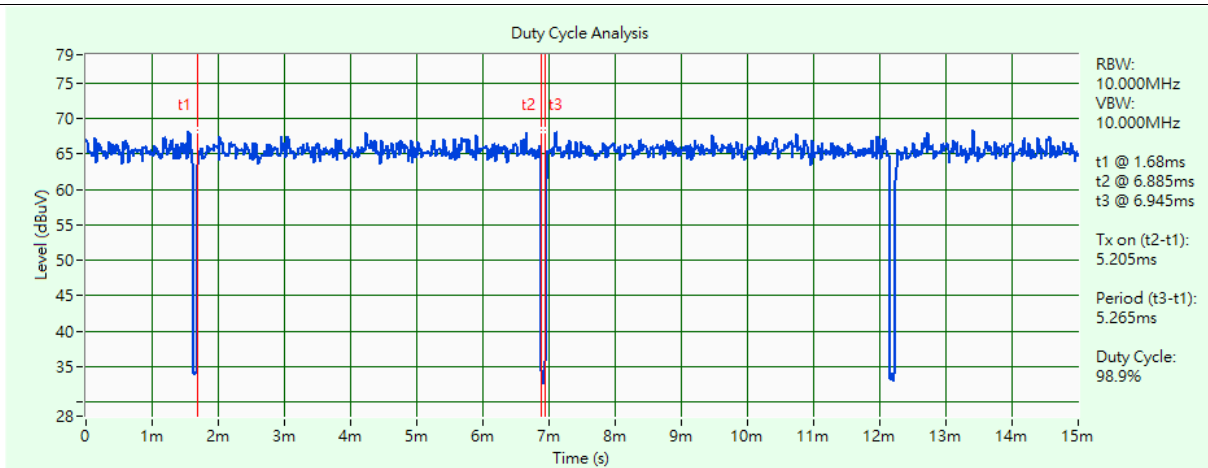
802.11be (EHT20)



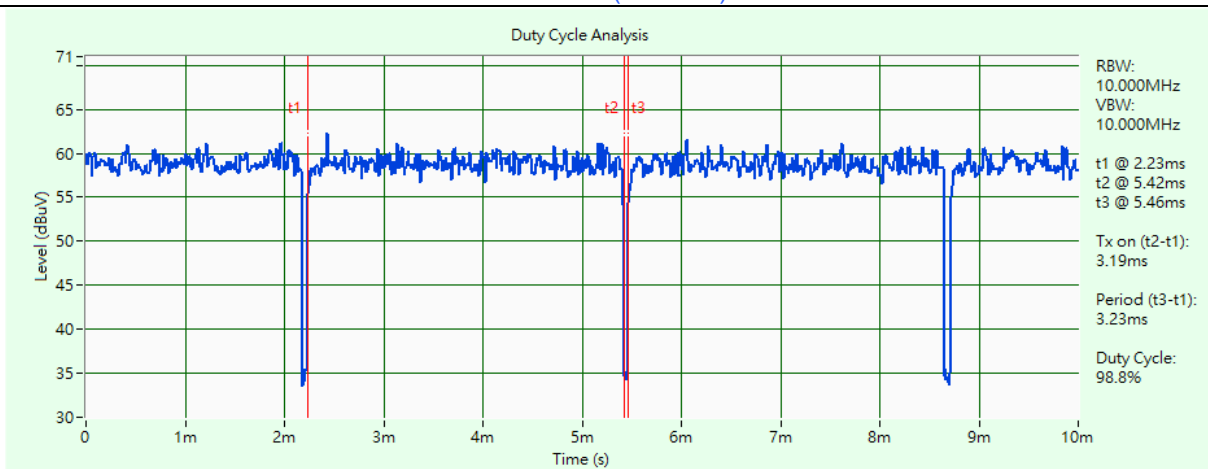
802.11be (EHT40)



802.11be (EHT80)



802.11be (EHT160)

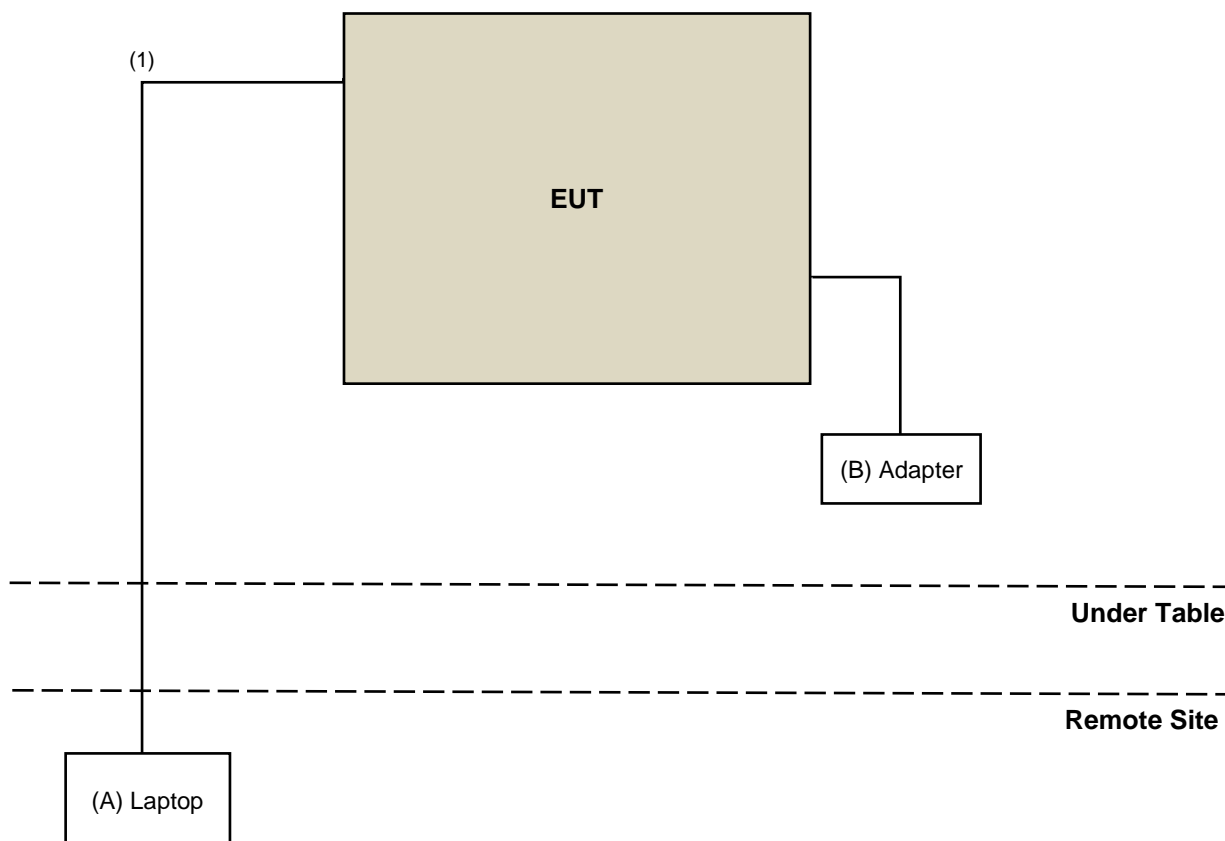


802.11be (EHT320)

### 3.6 Test Program Used and Operation Descriptions

Controlling software QSPR V5.0.188.0 has been activated to set the EUT under transmission condition continuously at specific channel frequency.

### 3.7 Connection Diagram of EUT and Peripheral Devices



### 3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Laptop	DELL	E5430	2RL3YW1	N/A	Provided by Lab
B	Adapter	NETGEAR	ADS-40FPC-12 12030E	N/A	N/A	Supplied by applicant

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	RJ-45 Cable	1	10	N	N	Provided by Lab

## 4 Test Instruments

The calibration interval of the all test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

### 4.1 Maximum RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower inn-co GmbH	MA 4000	010303	N/A	N/A
EMI Test Receiver R&S	ESR3	102782	2023/12/7	2024/12/6
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-408	2023/11/12	2024/11/11
Preamplifier Keysight	83017A	MY53270295	2023/5/7	2024/5/6
			2024/5/1	2025/4/30
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH4-03(250724)	2023/5/7	2024/5/6
			2024/5/1	2025/4/30
	Sucoflex 104	MY 13380+295012/04	2023/5/7	2024/5/6
			2024/5/1	2025/4/30
Signal & Spectrum Analyzer R&S	FSW43	101582	2024/4/12	2025/4/11
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 3.
2. Tested Date: 2024/4/29 ~ 2024/5/10

### 4.2 Maximum Power Spectral Density

Refer to section 4.1 to get the tested date and information of the instruments.

### 4.3 Emission Bandwidth

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Signal & Spectrum Analyzer R&S	FSV3044	101504	2023/6/5	2024/6/4
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2024/4/29 ~ 2024/4/30

#### 4.4 In-Band Emission Mask

Refer to section 4.3 to get the tested date and information of the instruments.

#### 4.5 Occupied Bandwidth

Refer to section 4.3 to get the tested date and information of the instruments.

#### 4.6 Frequency Stability

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
AC Power Supply JIN YIH Technology	6905S	1720444	N/A	N/A
Digital Multimeter Fluke	87III	70360742	2023/7/6	2024/7/5
Signal & Spectrum Analyzer R&S	FSV3044	101504	2023/6/5	2024/6/4
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A
Temperature & Humidity Chamber Terchy	HRM-120RF	931022	2023/12/19	2024/12/18

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2024/4/29 ~ 2024/4/30

#### 4.7 Contention-based Protocol

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
EXA Signal Analyzer Agilent	N9010A	MY52220207	2023/12/28	2024/12/27
MXG Vector Signal Generator Agilent	N5182B	MY53050430	2023/12/4	2024/12/3
MXG Vector Signal Generator Keysight	N5182BU	MY59360189	2023/12/4	2024/12/3
Power Divider Woken	0120A02058001M	DCMD33WIK3	2023/5/5	2024/5/4
		DCMD33WIK7	2023/5/5	2024/5/4

Notes:

1. The test was performed in Adaptivity room.
2. Tested Date: 2024/3/16

#### 4.8 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal resistance HUBER+SUHNER	E1-011315	13	2023/11/22	2024/11/21
50 ohm terminal resistance	E1-011279	04	2023/11/22	2024/11/21
	E1-011280	05	2023/11/22	2024/11/21
DC-LISN Schwarzbeck	NNBM 8126G	8126G-069	2023/11/7	2024/11/6
EMI Test Receiver R&S	ESCI	100613	2023/12/4	2024/12/3
Fixed Attenuator Mini-Circuits	HAT-10+	PAD-COND1-01	2024/1/6	2025/1/5
LISN R&S	ENV216	101826	2024/3/25	2025/3/24
	ESH3-Z5	100311	2023/9/6	2024/9/5
RF Coaxial Cable Woken	5D-FB	Cable-cond1-01	2024/1/6	2025/1/5
Software BVADT	BVADT_Cond_ V7.4.1.0	N/A	N/A	N/A
V-LISN Schwarzbeck	NNBL 8226-2	8226-142	2023/8/31	2024/8/30

Notes:

1. The test was performed in HY - Conduction 1.
2. Tested Date: 2024/4/24

#### 4.9 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower inn-co GmbH	MA 4000	010303	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-155	2023/10/13	2024/10/12
EMI Test Receiver R&S	ESR3	102782	2023/12/7	2024/12/6
Loop Antenna Electro-Metrics	EM-6879	269	2023/9/23	2024/9/22
Loop Antenna TESEQ	HLA 6121	45745	2023/8/8	2024/8/7
Preamplifier Agilent	8447D	2944A10631	2023/5/7	2024/5/6
Preamplifier EMCI	EMC001340	980201	2023/9/27	2024/9/26
RF Coaxial Cable Woken	8D-FB	Cable-CH4-01	2023/7/8	2024/7/7
Signal & Spectrum Analyzer R&S	FSW43	101582	2024/4/12	2025/4/11
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 3.
2. Tested Date: 2024/4/24

#### 4.10 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower inn-co GmbH	MA 4000	010303	N/A	N/A
Boresight antenna tower fixture BV	BAF-02	5	N/A	N/A
EMI Test Receiver R&S	ESR3	102782	2023/12/7	2024/12/6
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-408	2023/11/12	2024/11/11
	BBHA 9170	9170-480	2023/11/12	2024/11/11
		BBHA9170241	2023/10/16	2024/10/15
		BBHA9170243	2023/11/12	2024/11/11
Preamplifier EMCI	EMC 184045	980116	2023/9/27	2024/9/26
Preamplifier Keysight	83017A	MY53270295	2023/5/7	2024/5/6
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	2023/7/8	2024/7/7
	EMC102-KM-KM-3000	150929	2023/7/8	2024/7/7
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH4-03(250724)	2023/5/7	2024/5/6
	Sucoflex 104	MY 13380+295012/04	2023/5/7	2024/5/6
Signal & Spectrum Analyzer R&S	FSW43	101582	2024/4/12	2025/4/11
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 3.
2. Tested Date: 2024/4/18 ~ 2024/4/23



## 5 Limits of Test Items

### 5.1 Maximum RF Output Power

Operation Band	Equipment Class	Limit
		Maximum Average Power
U-NII-5 U-NII-6 U-NII-7 U-NII-8	6ID: 15E 6 GHz Low-power indoor access point	EIRP 30 dBm

### 5.2 Maximum Power Spectral Density

Operation Band	Equipment Class	Limit
		Maximum Power Density
U-NII-5 U-NII-6 U-NII-7 U-NII-8	6ID: 15E 6 GHz Low-power indoor access point	EIRP 5 dBm/MHz

### 5.3 Emission Bandwidth

The maximum transmitter channel bandwidth for U-NII devices in the 5.925-7.125 GHz band is 320 MHz.

### 5.4 In-Band Emission Mask

Test Item	Frequencies (MHz)	(X) dB <sup>*1</sup>
Emission Mask	At 1 MHz outside of channel edge	20
	At one channel bandwidth from the channel center <sup>*2</sup>	28
	At one- and one-half times the channel bandwidth away from channel center <sup>*3</sup>	40
	More than one- and one-half times the channel bandwidth	40

<sup>\*1</sup> : The power spectral density must be suppressed by "x" dB

<sup>\*2</sup> : At frequencies between one megahertz outside an unlicensed device's channel edge and one channel bandwidth from the center of the channel, the limits must be linearly interpolated between 20 dB and 28 dB suppression,

<sup>\*3</sup> : At frequencies between one and one- and one-half times an unlicensed device's channel bandwidth, the limits must be linearly interpolated between 28 dB and 40 dB suppression.

### 5.5 Occupied Bandwidth

The results are for reference only.

### 5.6 Frequency Stability

The frequency of the carrier signal shall be maintained within band of operation.

## 5.7 Contention-based Protocol

Unlicensed indoor low-power devices must detect co-channel radio frequency power that is at least -62 dBm (The threshold is referenced to a 0 dBi antenna gain.) or lower. Additionally, indoor low-power devices must detect co-channel energy with 90% or greater certainty.

## 5.8 AC Power Conducted Emissions

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Notes:

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

## 5.9 Unwanted Emissions below 1 GHz

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).

## 5.10 Unwanted Emissions above 1 GHz

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
Above 960	500	3

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any condition of modulation.

Limits of unwanted emission out of the restricted bands

Frequencies (MHz)	EIRP Limit	Equivalent Field Strength at 3 m
5925 MHz > F > 7125 MHz	Peak: -7 (dBm/MHz)	88.2 (dBuV/m)
	Average: -27 (dBm/MHz)	68.2 (dBuV/m)

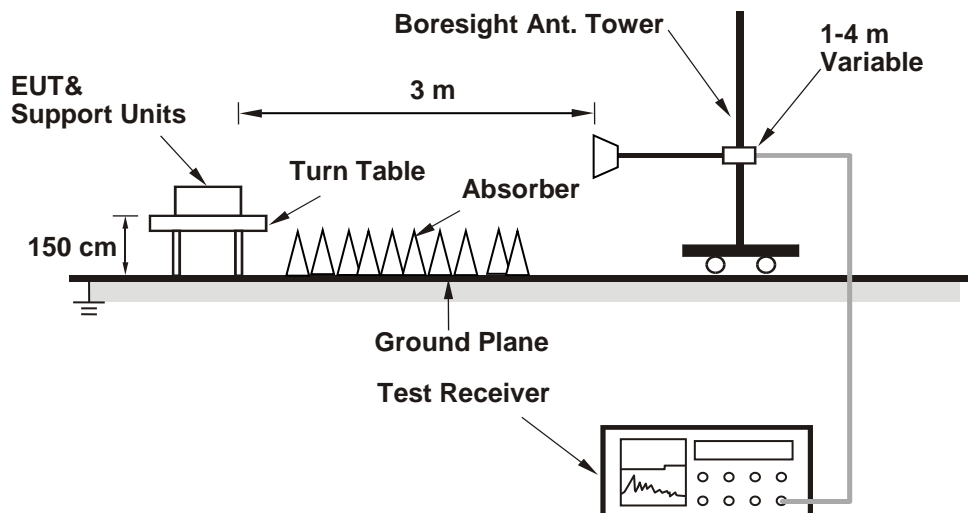
Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m, where } P \text{ is the eirp (Watts).}$$

## 6 Test Arrangements

### 6.1 Maximum RF Output Power

#### 6.1.1 Test Setup



#### 6.1.2 Test Procedure

- The EUT was placed on the top of a rotating table 1.5 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP level.
- Follow ANSI C63.10 section 12.7.3,  $EIRP \text{ Value (dBm)} = \text{Field Strength Value (dBuV / m)} + \text{Correction Factor @ 3 m}$ .
- $\text{Correction Factor (dB) @ 3 m} = 20\log(D) - 104.77 = -95.23 \text{ dB}$ ; where D is the measurement distance @3 m.

Spectrum analyzer setting as below:

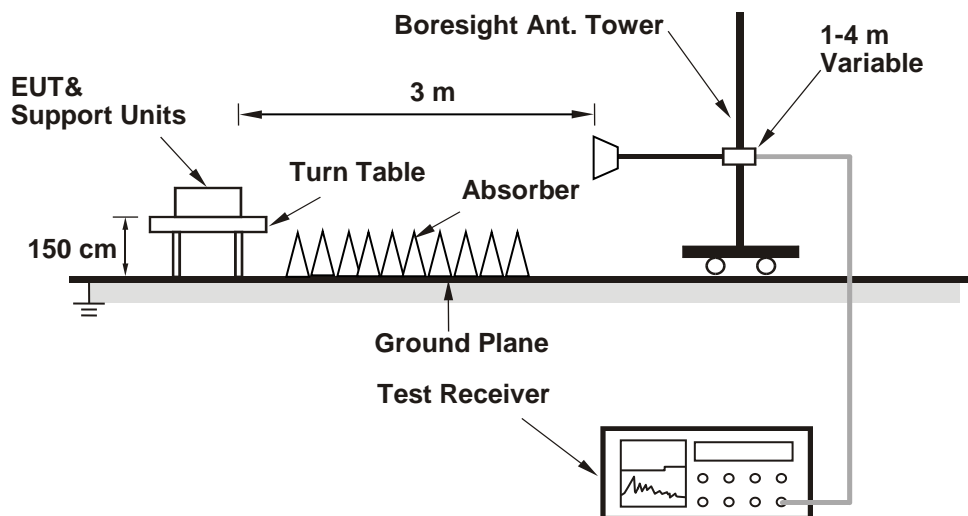
Method SA-1

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz, Set VBW  $\geq$  3 MHz, Detector = RMS
- Sweep points  $\geq [2 \times \text{span} / \text{RBW}]$ . (This gives bin-to-bin spacing  $\leq \text{RBW} / 2$ , so that narrowband signals are not lost between frequency bins.)
- Sweep time = auto, trigger set to "free run".
- Trace average at least 100 traces in power averaging mode.
- Record the max value

Note: When measuring power, use compute power by integrating the spectrum across the 26 dB EBW or 99% OBW of the signal using the instrument's band power measurement function, with band limits set equal to the EBW or OBW band edges. If the instrument does not have a band power function, then sum the spectrum levels (in power units) at 1 MHz intervals extending across the 26 dB EBW or 99% OBW of the spectrum.

## 6.2 Maximum Power Spectral Density

### 6.2.1 Test Setup



### 6.2.2 Test Procedure

- The EUT was placed on the top of a rotating table 1.5 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP level.
- Follow ANSI C63.10 section 12.7.3,  $EIRP \text{ Value (dBm)} = \text{Field Strength Value (dBuV/m)} + \text{Correction Factor @ 3 m}$ .
- $\text{Correction Factor (dB) @ 3 m} = 20\log(D) - 104.77$ ; where D is the measurement distance @3 m = -95.23 dB

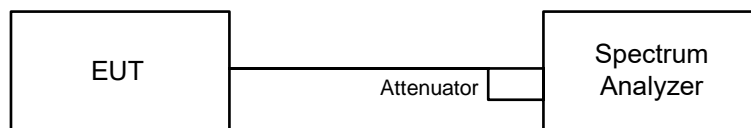
Spectrum analyzer setting as below:

#### Method SA-1

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz, Set VBW  $\geq$  3 MHz, Detector = RMS
- Sweep points  $\geq [2 \times \text{span} / \text{RBW}]$ . (This gives bin-to-bin spacing  $\leq \text{RBW} / 2$ , so that narrowband signals are not lost between frequency bins.)
- Sweep time = auto, trigger set to "free run".
- Trace average at least 100 traces in power averaging mode.
- Record the max value

## 6.3 Emission Bandwidth

### 6.3.1 Test Setup

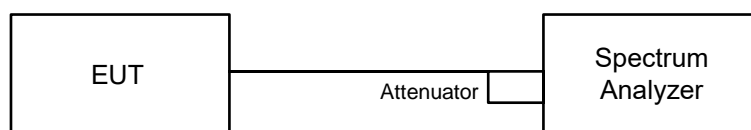


### 6.3.2 Test Procedure

- Set RBW = approximately 1% of the emission bandwidth.
- Set the VBW > RBW.
- Detector = Peak.
- Trace mode = max hold.
- Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

## 6.4 In-Band Emission Mask

### 6.4.1 Test Setup

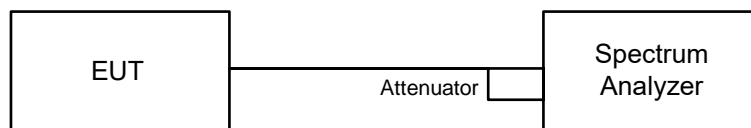


### 6.4.2 Test Procedure

- Connect output of the antenna port to a spectrum analyzer and adjust appropriate attenuation.
- Measure the 26 dB EBW using the test procedure 12.4.1 of ANSI C63.10-2013. (Determine the channel edge.)
- Measure the power spectral density (for emissions mask reference) using the following procedure:
  - Set the span to encompass the entire 26 dB EBW of the signal.
  - Set RBW = same RBW used for 26 dB EBW measurement.
  - Set VBW  $\geq$  [3 X RBW].
  - Number of points in sweep  $\geq$  [2 X span / RBW].
  - Sweep time = auto.
  - Detector = RMS (i.e., power averaging).
  - Trace average at least 100 traces in power averaging (rms) mode.
  - Use the peak search function on the instrument to find the peak of the spectrum.
- Using the measuring equipment limit line function, develop the emissions mask based on the following requirements. The emissions power spectral density must be reduced below the peak power spectral density (in dB) as follows:
  - Suppressed by 20 dB at 1 MHz outside of the channel edge. (The channel edge is defined as the 26-dB point on either side of the carrier center frequency.)
  - Suppressed by 28 dB at one channel bandwidth from the channel center.
  - Suppressed by 40 dB at one- and one-half times the channel bandwidth from the channel center.
- Adjust the span to encompass the entire mask as necessary and clear trace.
- Trace average at least 100 traces in power averaging (rms) mode.
- Adjust the reference level as necessary so that the crest of the channel touches the top of the emission mask

## 6.5 Occupied Bandwidth

### 6.5.1 Test Setup

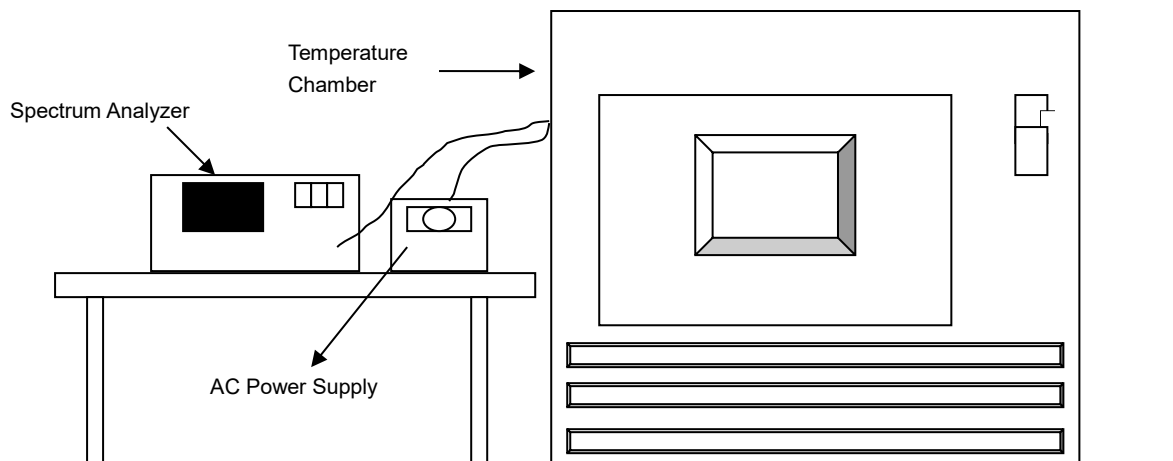


### 6.5.2 Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to Sampling. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean power of a given emission.

## 6.6 Frequency Stability

### 6.6.1 Test Setup

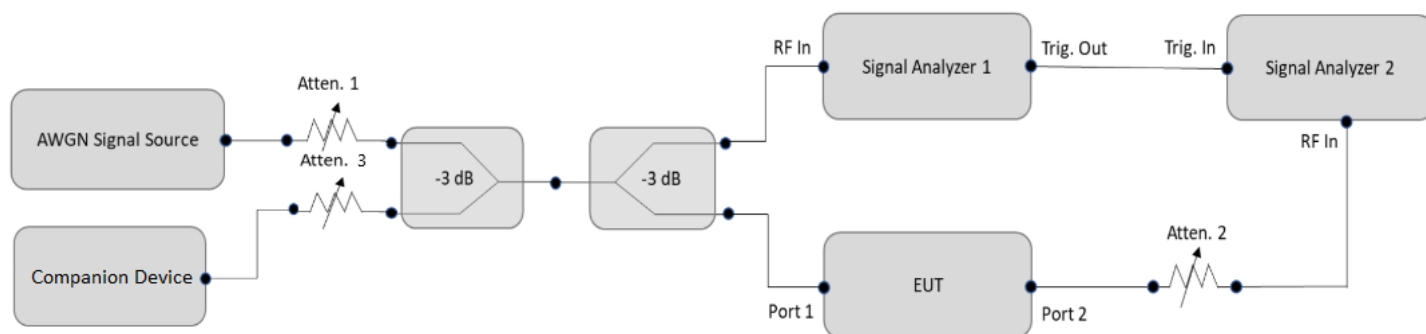


### 6.6.2 Test Procedure

- The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
- Turn the EUT on and couple its output to a spectrum analyzer.
- Turn the EUT off and set the chamber to the highest temperature specified.
- Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 Minutes.
- Repeat step (d) with the temperature chamber set to the next desired temperature until measurements down to the lowest specified temperature have been completed.
- The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 Minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

## 6.7 Contention-based Protocol

### 6.7.1 Test Setup



### 6.7.2 Test Procedure

- Set the signal analyzer center frequency to the nominal EUT channel center frequency. The span range of the signal analyzer shall be between two times and five times the OBW of the EUT. Connect the output port of the EUT to the signal analyzer 2. Ensure that the attenuator 2 provides enough attenuation to not overload the signal analyzer 2 receiver.
- Monitoring the signal analyzer 2, verify the EUT is operating and transmitting with the parameters (set as following section 4.7.5 EUT operating condition).
- Determine number of times detection threshold test as following table,

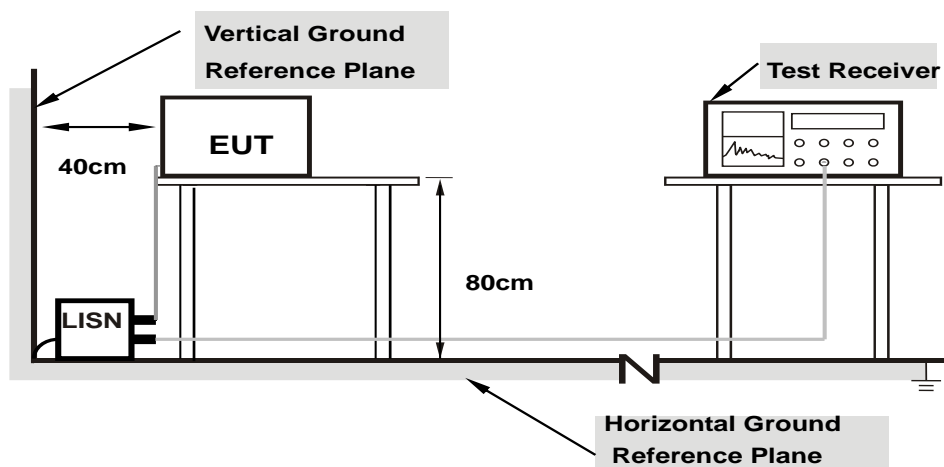
If	Number of Tests	Placement of Incumbent Transmission
$BW_{EUT} \leq BW_{Inc}$	Once	Same as EUT transmission
$BW_{Inc} < BW_{EUT} \leq 2x BW_{Inc}$	Once	Contained within $BW_{EUT}$
$2x BW_{Inc} < BW_{EUT} \leq 4x BW_{Inc}$	Twice. (Incumbent transmission is contained within $BW_{EUT}$ )	Closely to the lower edge and upper edge of the EUT Channel
$BW_{EUT} > 4x BW_{Inc}$	Three times	Closely to the lower edge , in the middle and upper edge of the EUT Channel

- Using an AWGN signal source, generate (but do not transmit, i.e., RF OFF) a 10 MHz-wide AWGN signal. Use step c table to determine the center frequency of the 10 MHz AWGN signal relative to the EUT's channel bandwidth and center frequency.
- Set the AWGN signal power to an extremely low level (more than 20 dB below the -62 dBm threshold). Connect the AWGN signal source, via a 3-dB splitter, to the signal analyzer 1 and the EUT.
- Transmit the AWGN signal (RF ON) and verify its characteristics on the signal analyzer 1.
- Monitor the signal analyzer 2 to verify if the AWGN signal has been detected and the EUT has ceased transmission. If the EUT continues to transmit, then incrementally increase the AWGN signal power level until the EUT stops transmitting.
- (Including all losses in the RF paths) Determine and record the AWGN signal power level (at the EUT's antenna port) at which the EUT ceased transmission. Repeat the procedure at least 10 times to verify the EUT can detect an AWGN signal with 90% (or better) level of certainty.
- Refer to step c table to determine number of times the detection threshold testing needs to be repeated. If testing is required more than once, then go back to step d, choose a different center frequency for the AWGN signal and repeat the process.



## 6.8 AC Power Conducted Emissions

### 6.8.1 Test Setup



**Note: 1. Support units were connected to second LISN.**

For the actual test configuration, please refer to the attached file (Test Setup Photo).

### 6.8.2 Test Procedure

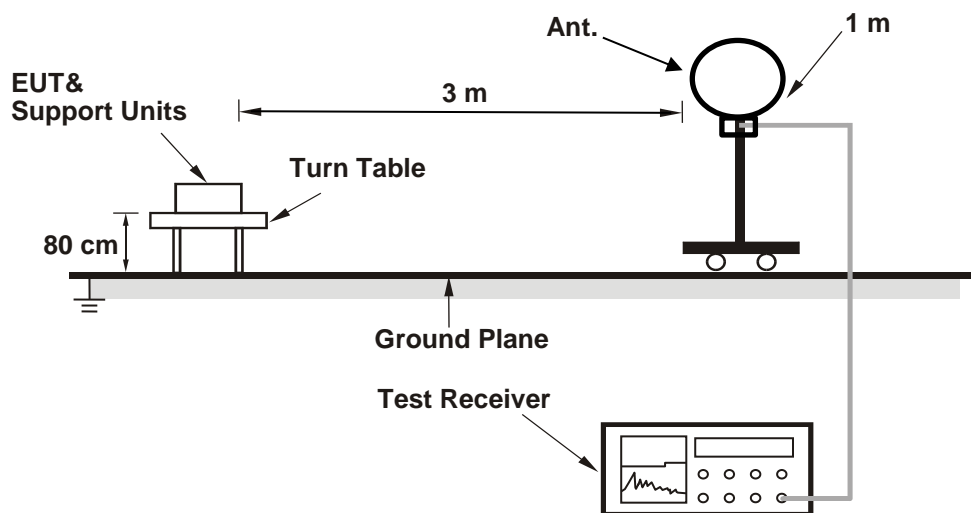
- The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50 uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

Note: The resolution bandwidth and video bandwidth of test receiver is 9 kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15 MHz-30 MHz.

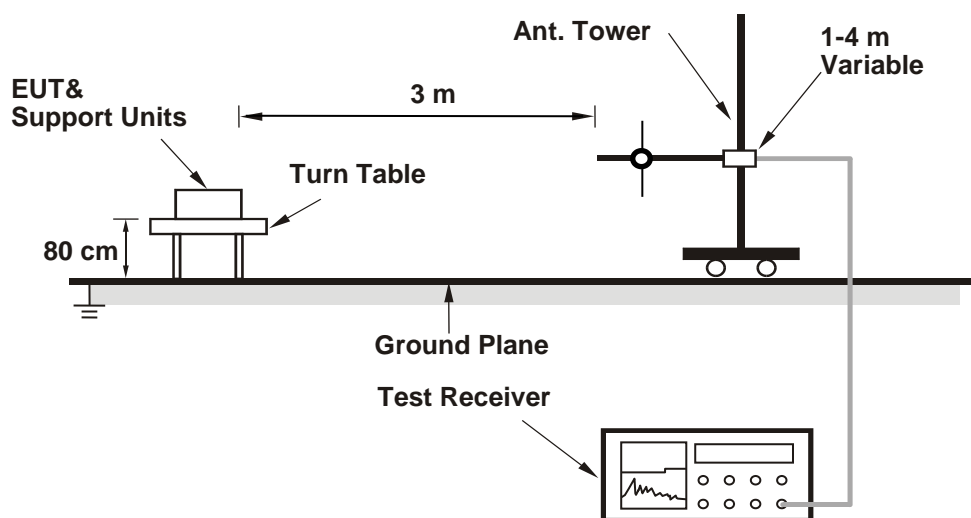
## 6.9 Unwanted Emissions below 1 GHz

### 6.9.1 Test Setup

#### For Radiated emission below 30 MHz



#### For Radiated emission above 30 MHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

## 6.9.2 Test Procedure

### For Radiated emission below 30 MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode, except for the frequency band (9 kHz to 90 kHz and 110 kHz to 490 kHz) set to average detect function and peak detect function.

#### Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 200 Hz at frequency below 150 kHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9 kHz or 10 kHz at frequency (150 kHz to 30 MHz).
3. All modes of operation were investigated and the worst-case emissions are reported.

### For Radiated emission above 30 MHz

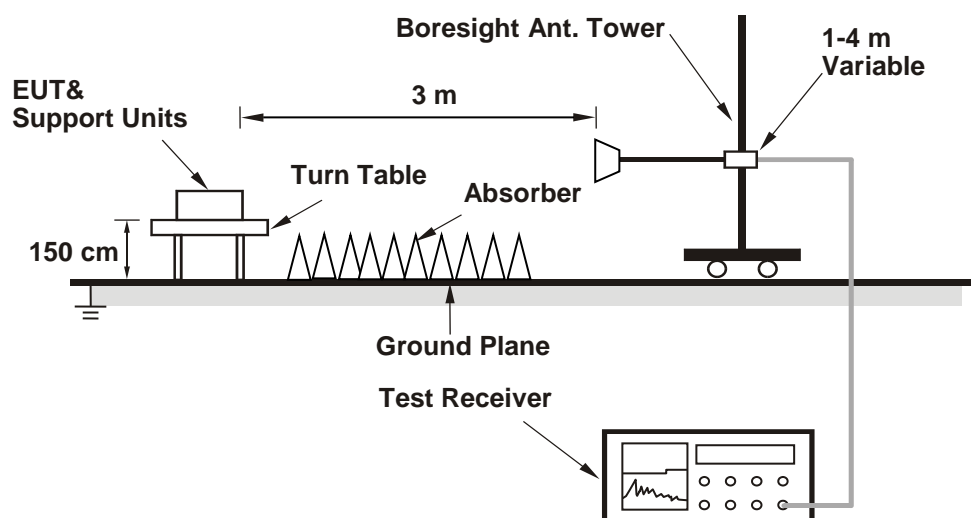
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

#### Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. All modes of operation were investigated and the worst-case emissions are reported.

## 6.10 Unwanted Emissions above 1 GHz

### 6.10.1 Test Setup



For the actual test configuration, please refer to the attached file (Test Setup Photo).

### 6.10.2 Test Procedure

- The EUT was placed on the top of a rotating table 1.5 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

#### Notes:

- The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) and Average detection (AV) at frequency above 1 GHz.
- For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is  $\geq 1/T$  (Duty cycle  $< 98\%$ ) or 10 Hz (Duty cycle  $\geq 98\%$ ) for Average detection (AV) at frequency above 1 GHz.
- All modes of operation were investigated and the worst-case emissions are reported.

## 7 Test Results of Test Item

### 7.1 Maximum RF Output Power

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang
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#### NSS1

#### 802.11a CDD

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
33	6115	111.77	-95.23	45.082	16.54	30	Pass
61	6255	111.81	-95.23	45.499	16.58	30	Pass
93	6415	111.75	-95.23	44.875	16.52	30	Pass
97	6435	111.83	-95.23	45.709	16.60	30	Pass
105	6475	111.98	-95.23	47.315	16.75	30	Pass
113	6515	111.94	-95.23	46.881	16.71	30	Pass
117	6535	112.10	-95.23	48.641	16.87	30	Pass
149	6695	111.90	-95.23	46.452	16.67	30	Pass
181	6855	112.08	-95.23	48.417	16.85	30	Pass
185	6875	111.99	-95.23	47.424	16.76	30	Pass
209	6995	112.00	-95.23	47.534	16.77	30	Pass
229	7095	112.08	-95.23	48.417	16.85	30	Pass
233	7115	112.00	-95.23	47.534	16.77	30	Pass

Spectrum Plot of Maximum Value



### 802.11be (EHT20) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
33	6115	114.80	-95.23	90.573	19.57	30	Pass
61	6255	114.73	-95.23	89.125	19.50	30	Pass
93	6415	114.77	-95.23	89.95	19.54	30	Pass
97	6435	114.73	-95.23	89.125	19.50	30	Pass
105	6475	114.84	-95.23	91.411	19.61	30	Pass
113	6515	114.77	-95.23	89.95	19.54	30	Pass
117	6535	115.10	-95.23	97.051	19.87	30	Pass
149	6695	114.97	-95.23	94.189	19.74	30	Pass
181	6855	115.05	-95.23	95.94	19.82	30	Pass
185	6875	114.83	-95.23	91.201	19.60	30	Pass
209	6995	115.08	-95.23	96.605	19.85	30	Pass
229	7095	114.92	-95.23	93.111	19.69	30	Pass
233	7115	100.47	-95.23	3.342	5.24	30	Pass

### 802.11be (EHT40) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
35	6125	117.68	-95.23	175.792	22.45	30	Pass
59	6245	117.58	-95.23	171.791	22.35	30	Pass
91	6405	117.65	-95.23	174.582	22.42	30	Pass
99	6445	117.53	-95.23	169.824	22.30	30	Pass
107	6485	117.33	-95.23	162.181	22.10	30	Pass
115	6525	117.30	-95.23	161.065	22.07	30	Pass
123	6565	117.66	-95.23	174.985	22.43	30	Pass
155	6725	117.63	-95.23	173.78	22.40	30	Pass
179	6845	117.55	-95.23	170.608	22.32	30	Pass
187	6885	117.18	-95.23	156.675	21.95	30	Pass
211	7005	117.54	-95.23	170.216	22.31	30	Pass
227	7085	117.43	-95.23	165.959	22.20	30	Pass

### 802.11be (EHT80) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
39	6145	120.50	-95.23	336.512	25.27	30	Pass
55	6225	120.33	-95.23	323.594	25.10	30	Pass
87	6385	120.24	-95.23	316.957	25.01	30	Pass
103	6465	120.48	-95.23	334.965	25.25	30	Pass
119	6545	120.21	-95.23	314.775	24.98	30	Pass
135	6625	120.39	-95.23	328.095	25.16	30	Pass
151	6705	120.41	-95.23	329.61	25.18	30	Pass
167	6785	120.30	-95.23	321.366	25.07	30	Pass
183	6865	120.27	-95.23	319.154	25.04	30	Pass
199	6945	120.36	-95.23	325.837	25.13	30	Pass
215	7025	120.29	-95.23	320.627	25.06	30	Pass

### 802.11be (EHT160) Beamforming

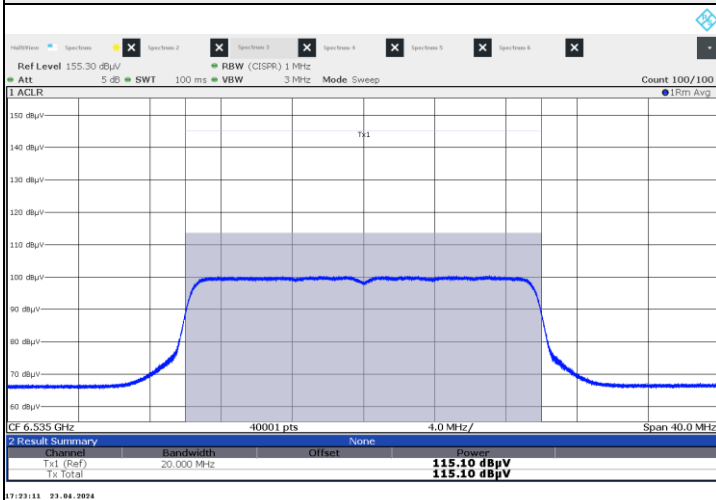
Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
47	6185	123.59	-95.23	685.488	28.36	30	Pass
79	6345	123.56	-95.23	680.769	28.33	30	Pass
111	6505	123.47	-95.23	666.807	28.24	30	Pass
143	6665	123.07	-95.23	608.135	27.84	30	Pass
175	6825	123.24	-95.23	632.412	28.01	30	Pass
207	6985	123.19	-95.23	625.173	27.96	30	Pass

### 802.11be (EHT320) Beamforming

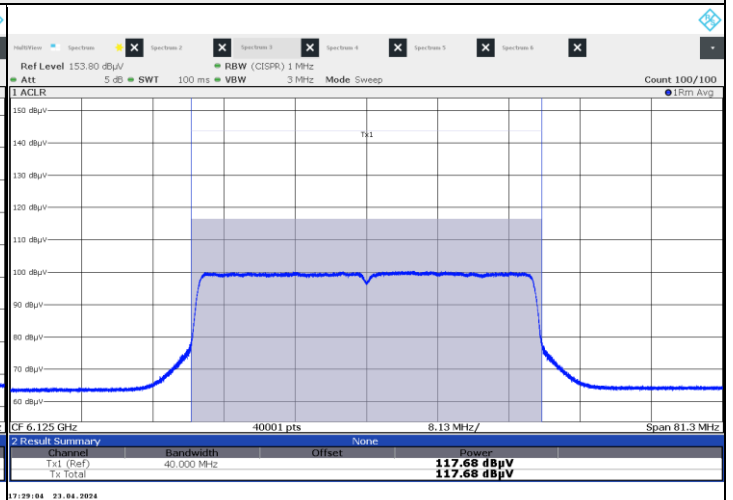
Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
63	6265	125.11	-95.23	972.747	29.88	30	Pass
95	6425	125.08	-95.23	966.051	29.85	30	Pass
127	6585	124.88	-95.23	922.571	29.65	30	Pass
159	6745	124.90	-95.23	926.83	29.67	30	Pass
191	6905	124.76	-95.23	897.429	29.53	30	Pass



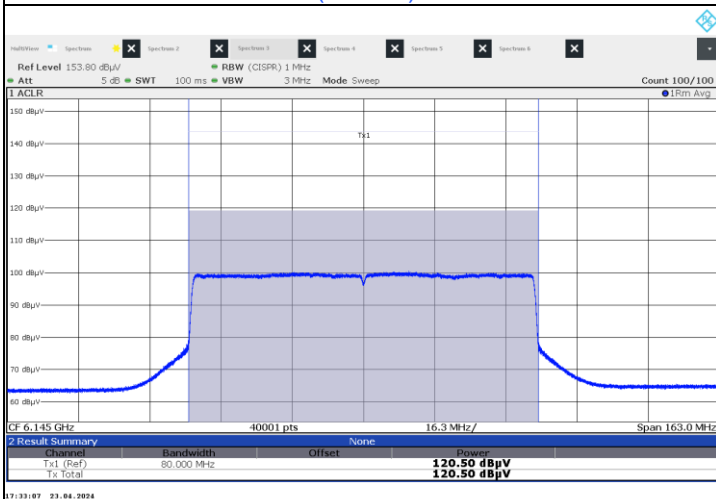
### Spectrum Plot of Maximum Value



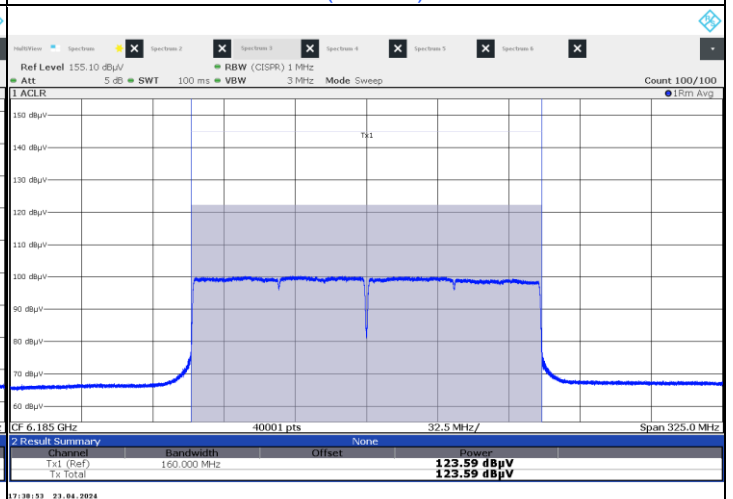
802.11be (EHT20) : CH 117



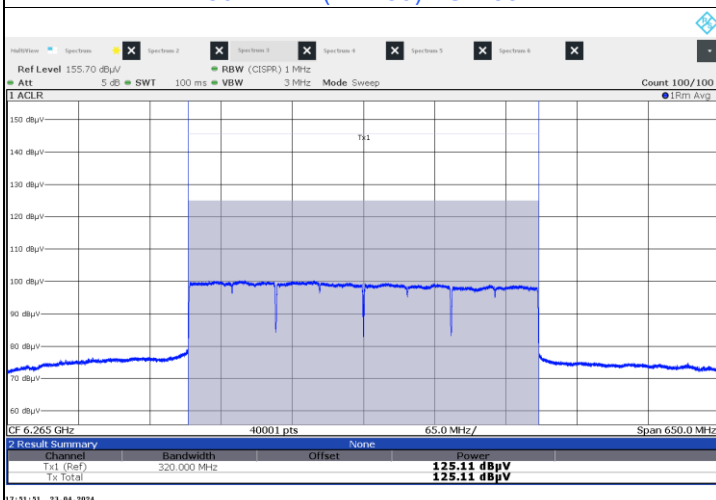
802.11be (EHT40) : CH 35



802.11be (EHT80) : CH 39



802.11be (EHT160) : CH 47



802.11be (EHT320) : CH 63



## NSS2

### 802.11be (EHT20) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
33	6115	114.83	-95.23	91.201	19.60	30	Pass
61	6255	114.78	-95.23	90.157	19.55	30	Pass
93	6415	114.77	-95.23	89.95	19.54	30	Pass
97	6435	114.74	-95.23	89.331	19.51	30	Pass
105	6475	114.76	-95.23	89.743	19.53	30	Pass
113	6515	114.74	-95.23	89.331	19.51	30	Pass
117	6535	114.95	-95.23	93.756	19.72	30	Pass
149	6695	114.85	-95.23	91.622	19.62	30	Pass
181	6855	114.76	-95.23	89.743	19.53	30	Pass
185	6875	114.79	-95.23	90.365	19.56	30	Pass
209	6995	114.93	-95.23	93.325	19.70	30	Pass
229	7095	114.76	-95.23	89.743	19.53	30	Pass
233	7115	100.58	-95.23	3.428	5.35	30	Pass

### 802.11be (EHT40) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
35	6125	117.30	-95.23	161.065	22.07	30	Pass
59	6245	117.25	-95.23	159.221	22.02	30	Pass
91	6405	117.08	-95.23	153.109	21.85	30	Pass
99	6445	117.21	-95.23	157.761	21.98	30	Pass
107	6485	117.05	-95.23	152.055	21.82	30	Pass
115	6525	117.21	-95.23	157.761	21.98	30	Pass
123	6565	117.17	-95.23	156.315	21.94	30	Pass
155	6725	117.19	-95.23	157.036	21.96	30	Pass
179	6845	117.23	-95.23	158.489	22.00	30	Pass
187	6885	117.42	-95.23	165.577	22.19	30	Pass
211	7005	117.26	-95.23	159.588	22.03	30	Pass
227	7085	117.29	-95.23	160.694	22.06	30	Pass

### 802.11be (EHT80) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
39	6145	120.82	-95.23	362.243	25.59	30	Pass
55	6225	120.61	-95.23	345.144	25.38	30	Pass
87	6385	120.72	-95.23	353.997	25.49	30	Pass
103	6465	120.80	-95.23	360.579	25.57	30	Pass
119	6545	120.65	-95.23	348.337	25.42	30	Pass
135	6625	120.62	-95.23	345.939	25.39	30	Pass
151	6705	120.56	-95.23	341.193	25.33	30	Pass
167	6785	120.81	-95.23	361.41	25.58	30	Pass
183	6865	120.55	-95.23	340.408	25.32	30	Pass
199	6945	119.97	-95.23	297.852	24.74	30	Pass
215	7025	120.02	-95.23	301.301	24.79	30	Pass

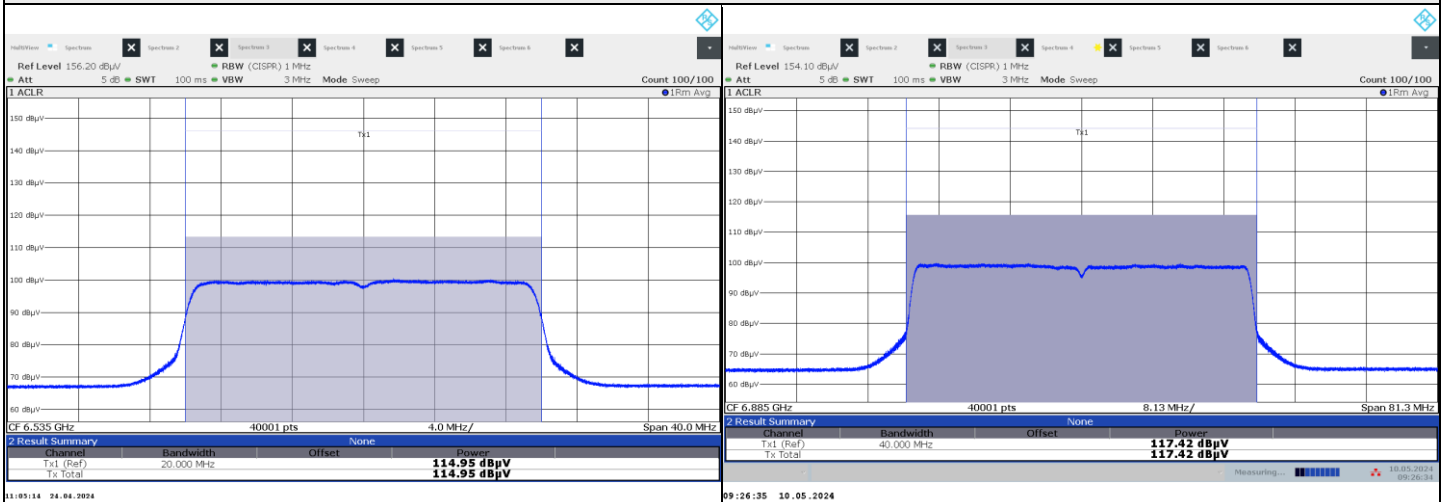
### 802.11be (EHT160) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
47	6185	123.72	-95.23	706.318	28.49	30	Pass
79	6345	123.55	-95.23	679.204	28.32	30	Pass
111	6505	123.65	-95.23	695.024	28.42	30	Pass
143	6665	123.47	-95.23	666.807	28.24	30	Pass
175	6825	123.65	-95.23	695.024	28.42	30	Pass
207	6985	123.03	-95.23	602.56	27.80	30	Pass

### 802.11be (EHT320) Beamforming

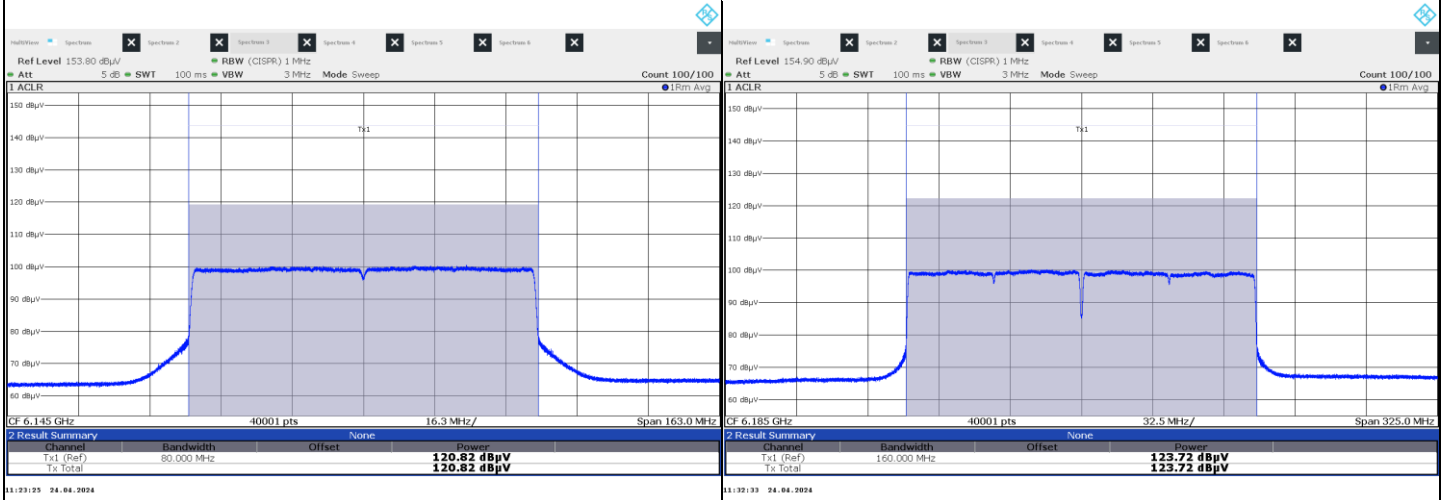
Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP (mW)	EIRP (dBm)	EIRP Limit (dBm)	Test Result
63	6265	124.82	-95.23	909.913	29.59	30	Pass
95	6425	124.79	-95.23	903.649	29.56	30	Pass
127	6585	124.78	-95.23	901.571	29.55	30	Pass
159	6745	124.75	-95.23	895.365	29.52	30	Pass
191	6905	124.17	-95.23	783.43	28.94	30	Pass

### Spectrum Plot of Maximum Value



802.11be (EHT20) : CH 117

802.11be (EHT40) : CH 187



802.11be (EHT80) : CH 39

802.11be (EHT160) : CH 47



802.11be (EHT320) : CH 63

## 7.2 Maximum Power Spectral Density

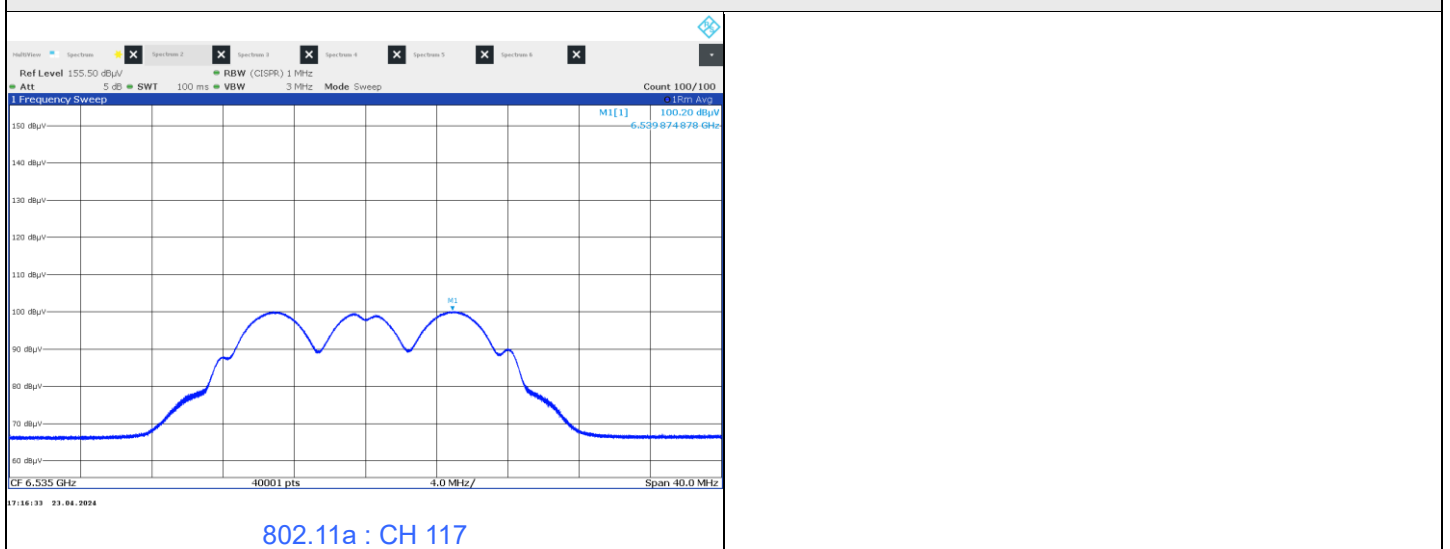
Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang
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### NSS1

#### 802.11a CDD

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
33	6115	100.16	-95.23	4.93	5	Pass
61	6255	100.09	-95.23	4.86	5	Pass
93	6415	100.20	-95.23	4.97	5	Pass
97	6435	100.03	-95.23	4.80	5	Pass
105	6475	100.19	-95.23	4.96	5	Pass
113	6515	100.18	-95.23	4.95	5	Pass
117	6535	100.20	-95.23	4.97	5	Pass
149	6695	100.07	-95.23	4.84	5	Pass
181	6855	100.14	-95.23	4.91	5	Pass
185	6875	100.09	-95.23	4.86	5	Pass
209	6995	100.08	-95.23	4.85	5	Pass
229	7095	100.19	-95.23	4.96	5	Pass
233	7115	100.15	-95.23	4.92	5	Pass

Spectrum Plot of Maximum Value



### 802.11be (EHT20) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
33	6115	100.15	-95.23	4.92	5	Pass
61	6255	100.08	-95.23	4.85	5	Pass
93	6415	100.07	-95.23	4.84	5	Pass
97	6435	100.13	-95.23	4.90	5	Pass
105	6475	100.03	-95.23	4.80	5	Pass
113	6515	100.18	-95.23	4.95	5	Pass
117	6535	100.20	-95.23	4.97	5	Pass
149	6695	100.17	-95.23	4.94	5	Pass
181	6855	100.18	-95.23	4.95	5	Pass
185	6875	100.18	-95.23	4.95	5	Pass
209	6995	100.15	-95.23	4.92	5	Pass
229	7095	100.12	-95.23	4.89	5	Pass
233	7115	85.78	-95.23	-9.45	5	Pass

### 802.11be (EHT40) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
35	6125	100.21	-95.23	4.98	5	Pass
59	6245	100.17	-95.23	4.94	5	Pass
91	6405	100.20	-95.23	4.97	5	Pass
99	6445	100.07	-95.23	4.84	5	Pass
107	6485	100.11	-95.23	4.88	5	Pass
115	6525	100.18	-95.23	4.95	5	Pass
123	6565	100.10	-95.23	4.87	5	Pass
155	6725	100.14	-95.23	4.91	5	Pass
179	6845	100.07	-95.23	4.84	5	Pass
187	6885	100.07	-95.23	4.84	5	Pass
211	7005	100.17	-95.23	4.94	5	Pass
227	7085	100.17	-95.23	4.94	5	Pass

### 802.11be (EHT80) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
39	6145	100.21	-95.23	4.98	5	Pass
55	6225	100.07	-95.23	4.84	5	Pass
87	6385	100.18	-95.23	4.95	5	Pass
103	6465	100.04	-95.23	4.81	5	Pass
119	6545	100.15	-95.23	4.92	5	Pass
135	6625	100.05	-95.23	4.82	5	Pass
151	6705	100.19	-95.23	4.96	5	Pass
167	6785	100.15	-95.23	4.92	5	Pass
183	6865	100.14	-95.23	4.91	5	Pass
199	6945	100.19	-95.23	4.96	5	Pass
215	7025	100.08	-95.23	4.85	5	Pass

### 802.11be (EHT160) Beamforming

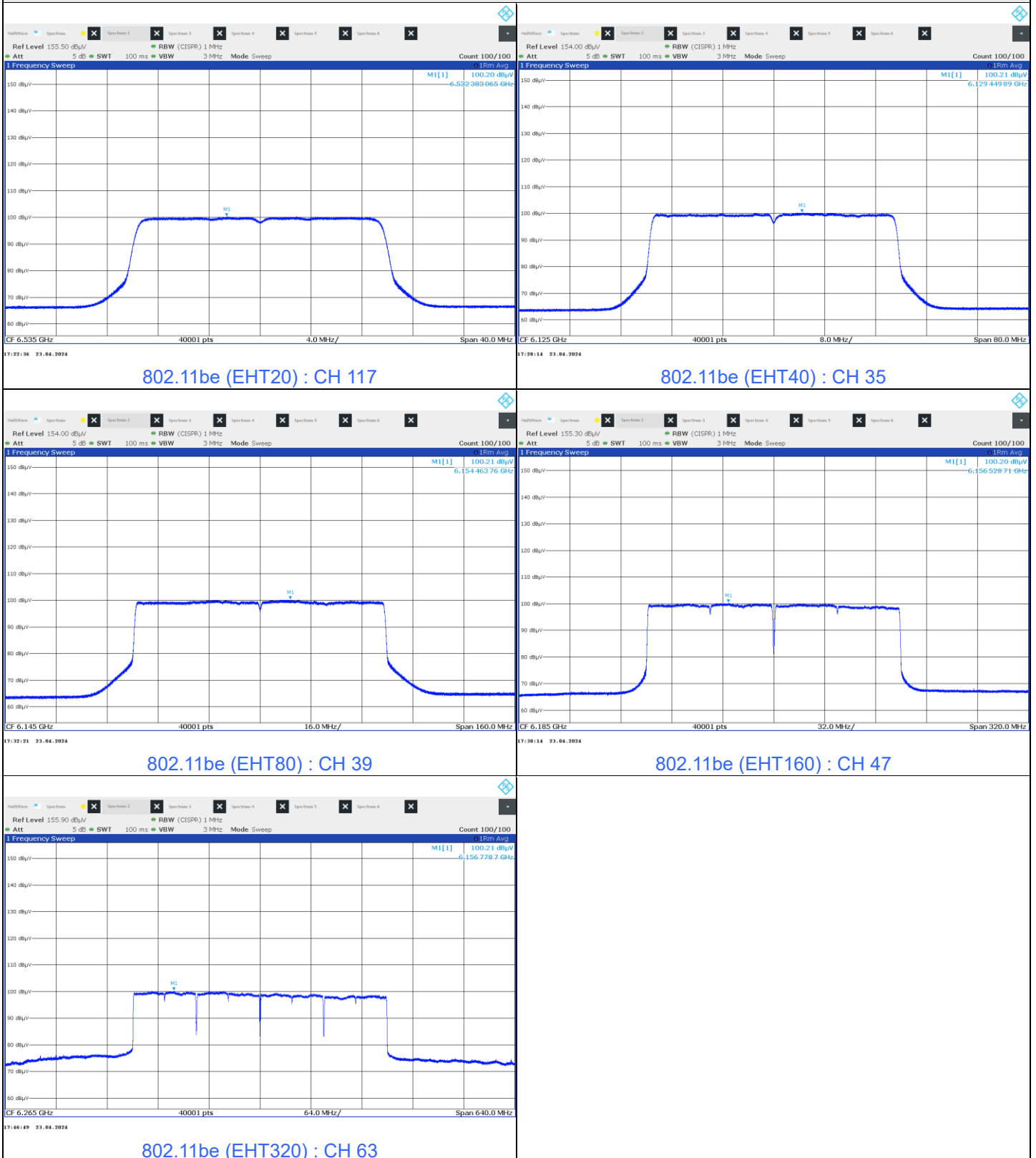
Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
47	6185	100.20	-95.23	4.97	5	Pass
79	6345	100.08	-95.23	4.85	5	Pass
111	6505	100.19	-95.23	4.96	5	Pass
143	6665	100.08	-95.23	4.85	5	Pass
175	6825	100.07	-95.23	4.84	5	Pass
207	6985	100.18	-95.23	4.95	5	Pass

### 802.11be (EHT320) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
63	6265	100.21	-95.23	4.98	5	Pass
95	6425	100.06	-95.23	4.83	5	Pass
127	6585	100.12	-95.23	4.89	5	Pass
159	6745	100.17	-95.23	4.94	5	Pass
191	6905	100.19	-95.23	4.96	5	Pass



### Spectrum Plot of Maximum Value



**NSS2**
**802.11be (EHT20) Beamforming**

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
33	6115	100.18	-95.23	4.95	5	Pass
61	6255	100.15	-95.23	4.92	5	Pass
93	6415	100.19	-95.23	4.96	5	Pass
97	6435	100.20	-95.23	4.97	5	Pass
105	6475	100.14	-95.23	4.91	5	Pass
113	6515	100.15	-95.23	4.92	5	Pass
117	6535	100.21	-95.23	4.98	5	Pass
149	6695	100.20	-95.23	4.97	5	Pass
181	6855	100.14	-95.23	4.91	5	Pass
185	6875	100.17	-95.23	4.94	5	Pass
209	6995	100.16	-95.23	4.93	5	Pass
229	7095	100.19	-95.23	4.96	5	Pass
233	7115	85.52	-95.23	-9.71	5	Pass

**802.11be (EHT40) Beamforming**

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
35	6125	100.21	-95.23	4.98	5	Pass
59	6245	100.13	-95.23	4.90	5	Pass
91	6405	100.20	-95.23	4.97	5	Pass
99	6445	100.14	-95.23	4.91	5	Pass
107	6485	100.20	-95.23	4.97	5	Pass
115	6525	100.14	-95.23	4.91	5	Pass
123	6565	100.13	-95.23	4.90	5	Pass
155	6725	100.18	-95.23	4.95	5	Pass
179	6845	100.15	-95.23	4.92	5	Pass
187	6885	100.15	-95.23	4.92	5	Pass
211	7005	100.20	-95.23	4.97	5	Pass
227	7085	100.18	-95.23	4.95	5	Pass



### 802.11be (EHT80) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
39	6145	100.21	-95.23	4.98	5	Pass
55	6225	100.15	-95.23	4.92	5	Pass
87	6385	100.15	-95.23	4.92	5	Pass
103	6465	100.19	-95.23	4.96	5	Pass
119	6545	100.21	-95.23	4.98	5	Pass
135	6625	100.18	-95.23	4.95	5	Pass
151	6705	100.15	-95.23	4.92	5	Pass
167	6785	100.17	-95.23	4.94	5	Pass
183	6865	100.20	-95.23	4.97	5	Pass
199	6945	100.12	-95.23	4.89	5	Pass
215	7025	100.15	-95.23	4.92	5	Pass

### 802.11be (EHT160) Beamforming

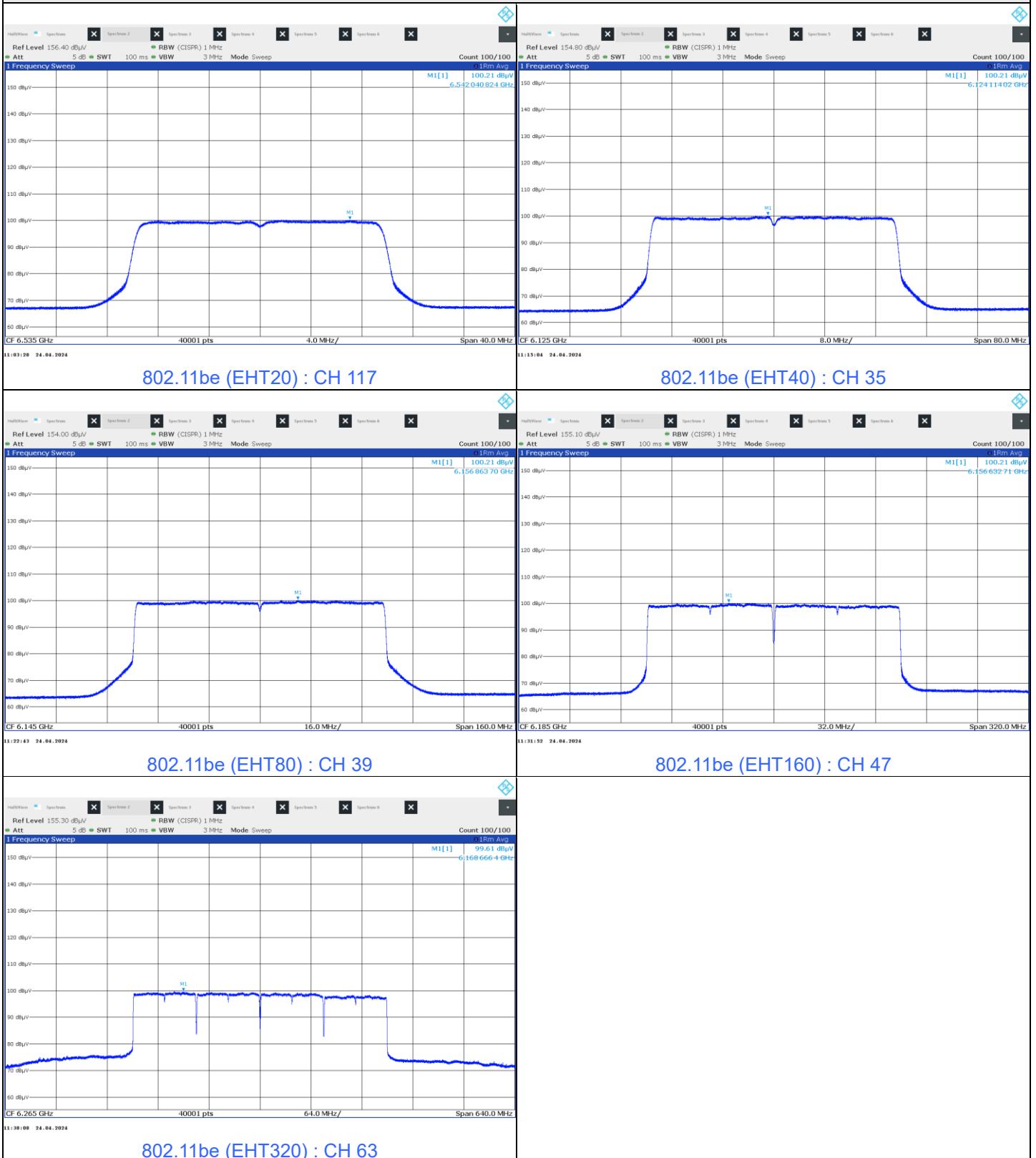
Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
47	6185	100.21	-95.23	4.98	5	Pass
79	6345	100.19	-95.23	4.96	5	Pass
111	6505	100.20	-95.23	4.97	5	Pass
143	6665	100.15	-95.23	4.92	5	Pass
175	6825	100.20	-95.23	4.97	5	Pass
207	6985	100.19	-95.23	4.96	5	Pass

### 802.11be (EHT320) Beamforming

Chan.	Chan. Freq. (MHz)	Field Strength (dBuV/m)	Correction Factor (dB)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
63	6265	99.61	-95.23	4.38	5	Pass
95	6425	99.54	-95.23	4.31	5	Pass
127	6585	99.56	-95.23	4.33	5	Pass
159	6745	99.59	-95.23	4.36	5	Pass
191	6905	98.46	-95.23	3.23	5	Pass



### Spectrum Plot of Maximum Value



### 7.3 Emission Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang
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#### NSS1

##### 802.11a

Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
33	6115	22.41	23.05	320	Pass
61	6255	22.43	22.32	320	Pass
93	6415	23.07	22.39	320	Pass
97	6435	22.37	22.53	320	Pass
105	6475	22.37	22.49	320	Pass
113	6515	22.53	22.34	320	Pass
117	6535	22.39	22.38	320	Pass
149	6695	23.08	22.36	320	Pass
181	6855	23.10	23.00	320	Pass
185	6875	22.55	22.99	320	Pass
209	6995	23.13	22.43	320	Pass
229	7095	23.12	22.32	320	Pass
233	7115	22.27	22.37	320	Pass

##### 802.11be (EHT20)

Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
33	6115	23.75	23.59	320	Pass
61	6255	23.65	23.73	320	Pass
93	6415	23.67	23.76	320	Pass
97	6435	23.66	23.67	320	Pass
105	6475	23.21	23.44	320	Pass
113	6515	23.74	23.58	320	Pass
117	6535	23.74	23.43	320	Pass
149	6695	23.75	23.64	320	Pass
181	6855	23.72	23.63	320	Pass
185	6875	23.70	23.73	320	Pass
209	6995	23.78	23.72	320	Pass
229	7095	23.62	23.24	320	Pass
233	7115	23.27	23.01	320	Pass

**802.11be (EHT40)**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
35	6125	44.92	45.32	320	Pass
59	6245	44.60	44.98	320	Pass
91	6405	44.82	44.64	320	Pass
99	6445	44.82	44.58	320	Pass
107	6485	44.84	45.17	320	Pass
115	6525	44.81	44.50	320	Pass
123	6565	44.82	44.38	320	Pass
155	6725	44.75	44.43	320	Pass
179	6845	45.12	44.99	320	Pass
187	6885	45.42	44.59	320	Pass
211	7005	44.44	45.86	320	Pass
227	7085	44.88	44.51	320	Pass

**802.11be (EHT80)**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
39	6145	89.78	91.00	320	Pass
55	6225	90.18	90.30	320	Pass
87	6385	89.55	90.76	320	Pass
103	6465	90.57	91.16	320	Pass
119	6545	90.52	88.93	320	Pass
135	6625	89.54	90.78	320	Pass
151	6705	89.53	92.59	320	Pass
167	6785	90.74	88.98	320	Pass
183	6865	90.32	91.10	320	Pass
199	6945	89.45	90.81	320	Pass
215	7025	89.62	89.23	320	Pass

**802.11be (EHT160)**

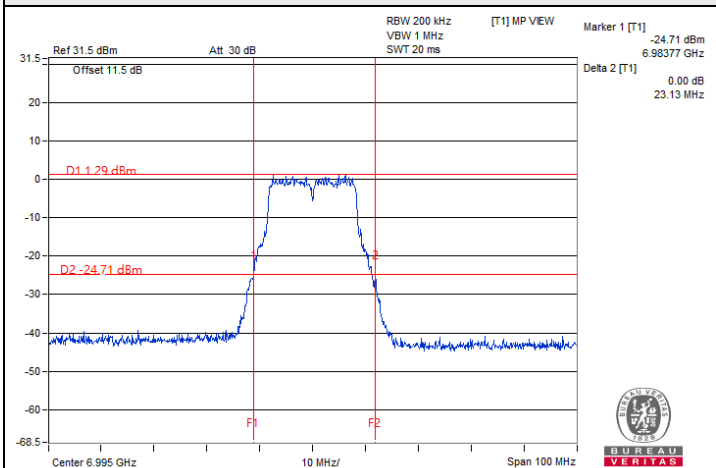
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
47	6185	174.19	173.73	320	Pass
79	6345	173.29	171.91	320	Pass
111	6505	173.34	173.25	320	Pass
143	6665	173.23	171.80	320	Pass
175	6825	172.94	171.56	320	Pass
207	6985	172.28	174.55	320	Pass

**802.11be (EHT320)**

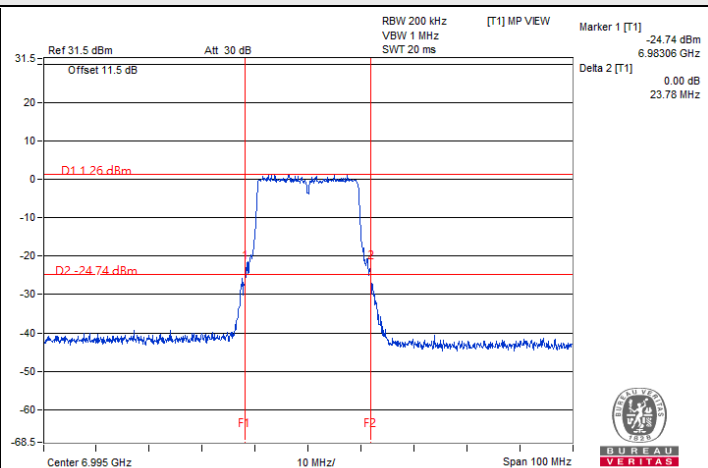
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
63	6265	339.20	335.13	320	Note
95	6425	336.81	336.85	320	Note
127	6585	336.27	339.61	320	Note
159	6745	340.32	339.89	320	Note
191	6905	337.08	338.23	320	Note

Note: For channels with a nominal bandwidth of 320 MHz, compliance is demonstrated by way of the 99% BW.

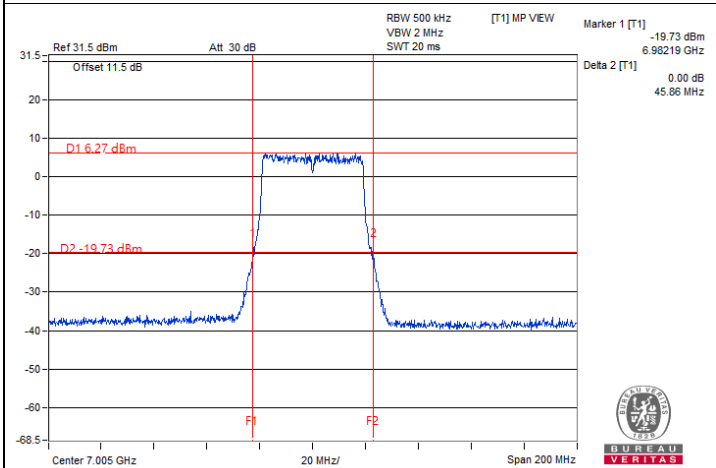
### Spectrum Plot of Maximum Value



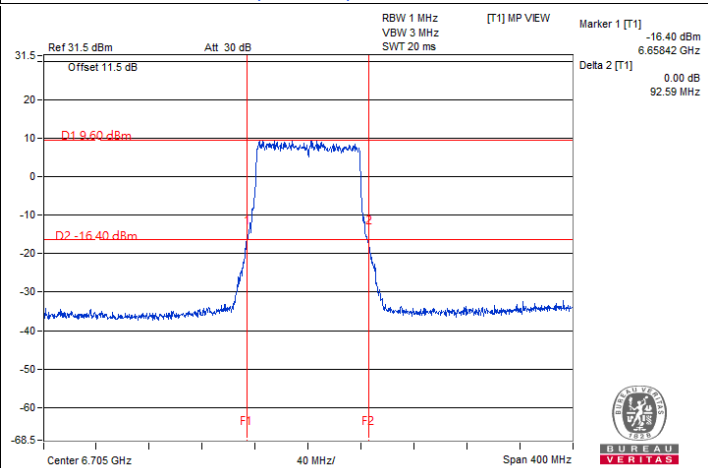
802.11a / Chain 0 : CH 209



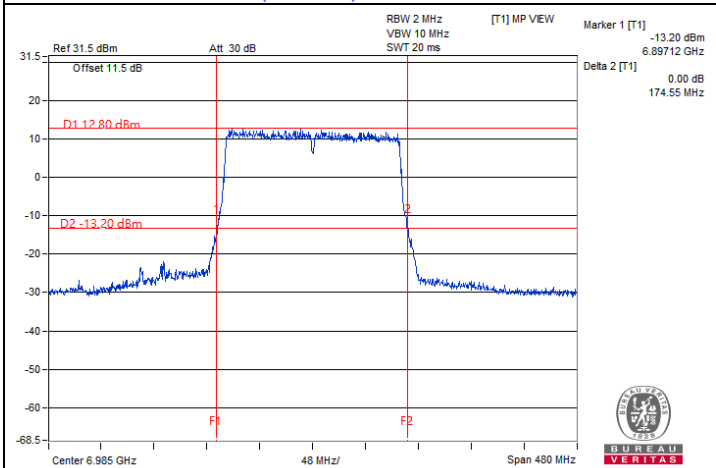
802.11be (EHT20) / Chain 0 : CH 209



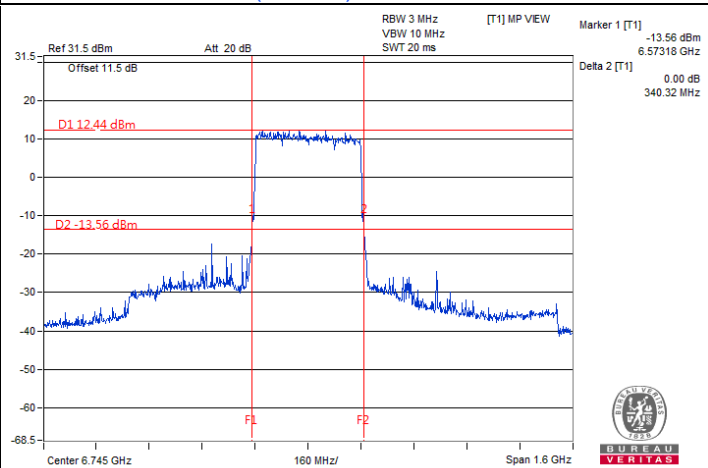
802.11be (EHT40) / Chain 1 : CH 211



802.11be (EHT80) / Chain 1 : CH 151



802.11be (EHT160) / Chain 1 : CH 207



802.11be (EHT320) / Chain 0 : CH 159

**NSS2**
**802.11be (EHT20)**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
33	6115	23.16	22.93	320	Pass
61	6255	22.97	23.30	320	Pass
93	6415	22.53	22.50	320	Pass
97	6435	22.76	23.07	320	Pass
105	6475	23.16	22.69	320	Pass
113	6515	22.85	22.78	320	Pass
117	6535	22.83	22.65	320	Pass
149	6695	22.92	22.85	320	Pass
181	6855	22.89	22.86	320	Pass
185	6875	22.83	22.91	320	Pass
209	6995	22.98	22.61	320	Pass
229	7095	22.89	22.96	320	Pass
233	7115	22.86	22.96	320	Pass

**802.11be (EHT40)**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
35	6125	44.35	44.93	320	Pass
59	6245	45.24	44.46	320	Pass
91	6405	44.46	45.27	320	Pass
99	6445	44.61	44.86	320	Pass
107	6485	44.96	44.66	320	Pass
115	6525	45.09	45.36	320	Pass
123	6565	44.99	44.81	320	Pass
155	6725	44.45	44.88	320	Pass
179	6845	45.29	44.53	320	Pass
187	6885	44.54	44.80	320	Pass
211	7005	44.73	45.11	320	Pass
227	7085	45.12	44.71	320	Pass

**802.11be (EHT80)**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
39	6145	90.73	90.66	320	Pass
55	6225	90.23	91.52	320	Pass
87	6385	92.18	90.85	320	Pass
103	6465	91.23	91.09	320	Pass
119	6545	90.55	90.42	320	Pass
135	6625	90.30	91.96	320	Pass
151	6705	91.38	91.31	320	Pass
167	6785	90.48	91.56	320	Pass
183	6865	91.87	92.58	320	Pass
199	6945	92.87	92.04	320	Pass
215	7025	90.83	90.60	320	Pass

**802.11be (EHT160)**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
47	6185	177.49	177.51	320	Pass
79	6345	177.68	176.69	320	Pass
111	6505	225.97	175.42	320	Pass
143	6665	176.47	177.88	320	Pass
175	6825	178.77	225.50	320	Pass
207	6985	247.03	226.02	320	Pass

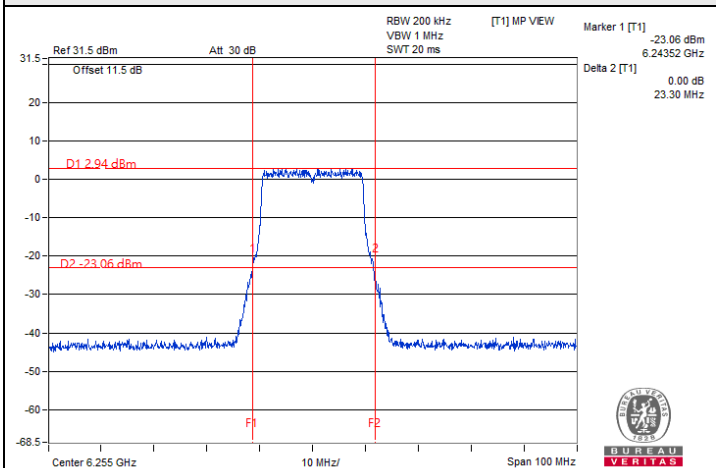
**802.11be (EHT320)**

Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Maximum Limit (MHz)	Test Result
		Chain 0	Chain 1		
63	6265	336.77	340.38	320	Note
95	6425	336.51	340.64	320	Note
127	6585	339.67	340.08	320	Note
159	6745	335.64	337.21	320	Note
191	6905	337.01	337.87	320	Note

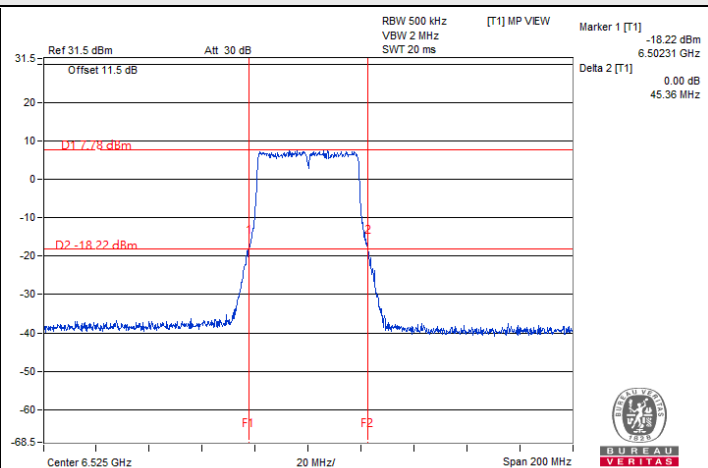
Note: For channels with a nominal bandwidth of 320 MHz, compliance is demonstrated by way of the 99% BW.



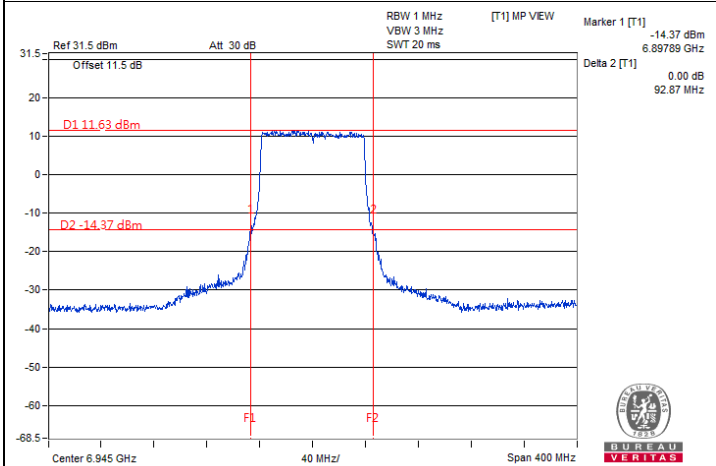
### Spectrum Plot of Maximum Value



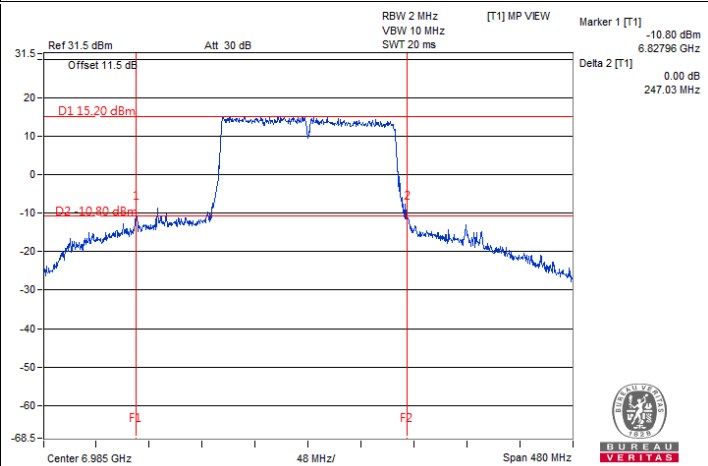
802.11be (EHT20) / Chain 1 : CH 61



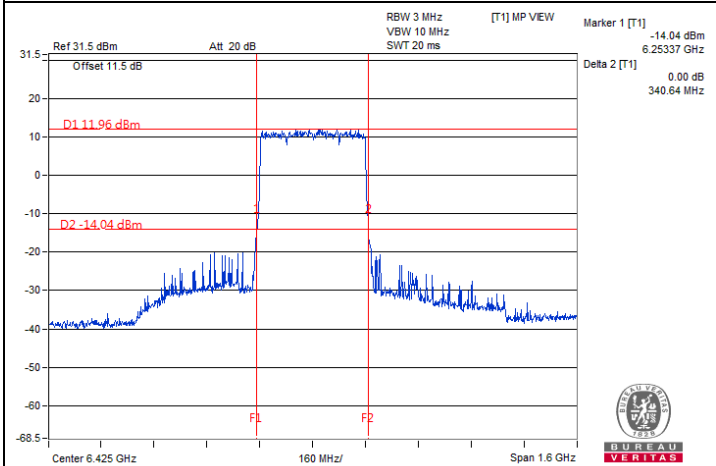
802.11be (EHT40) / Chain 1 : CH 115



802.11be (EHT80) / Chain 0 : CH 199



802.11be (EHT160) / Chain 0 : CH 207



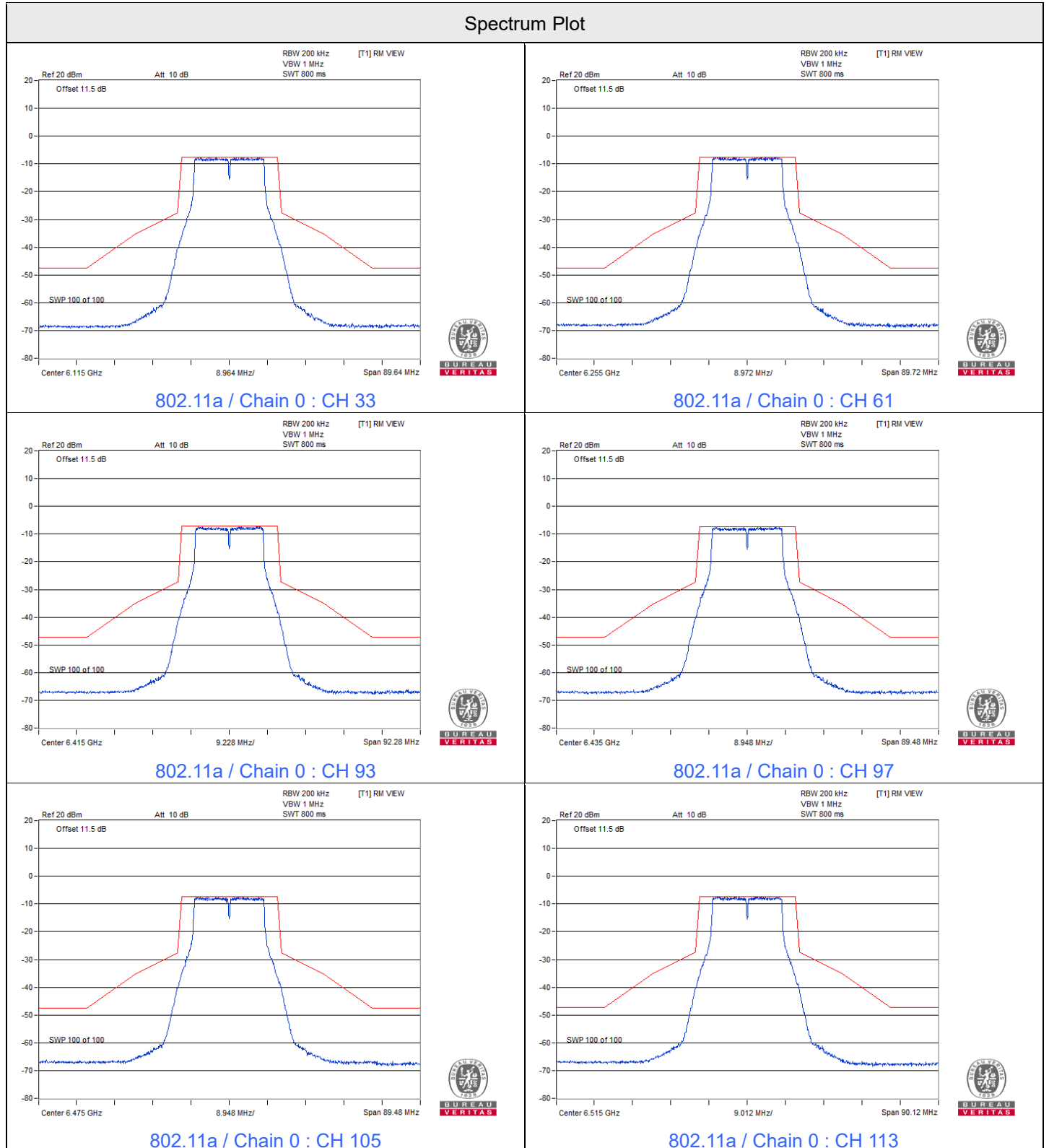
802.11be (EHT320) / Chain 1 : CH 95

### 7.4 In-Band Emission Mask

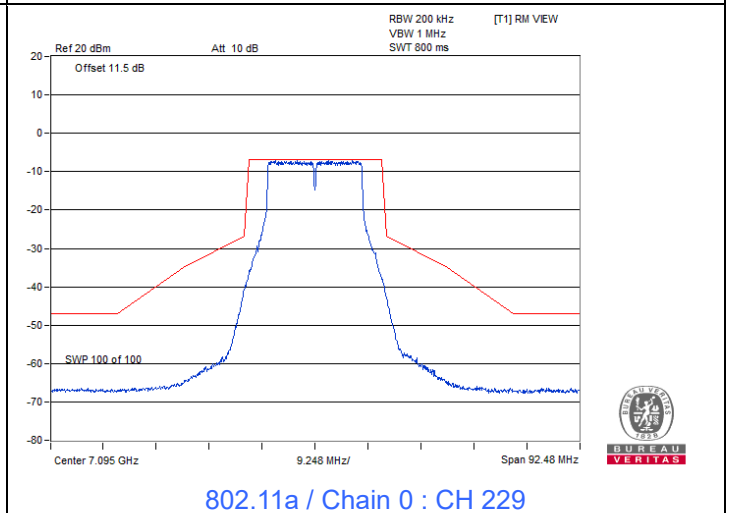
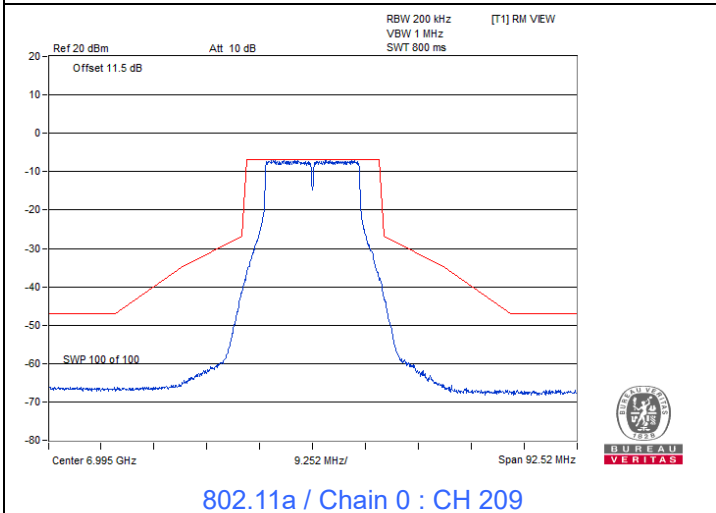
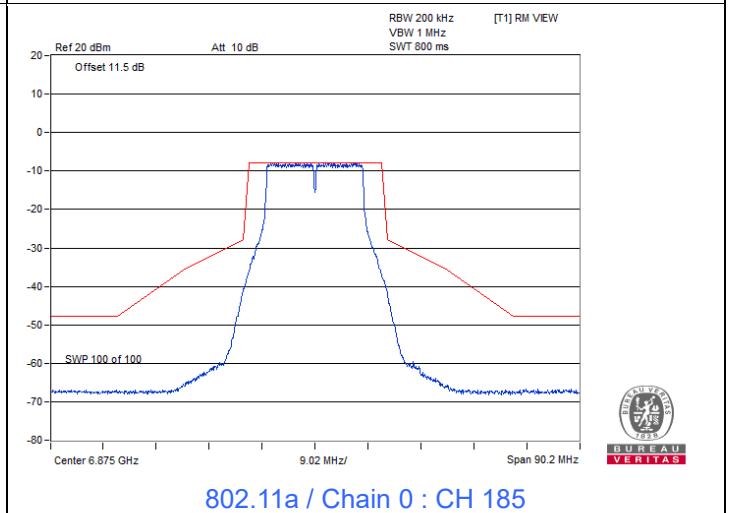
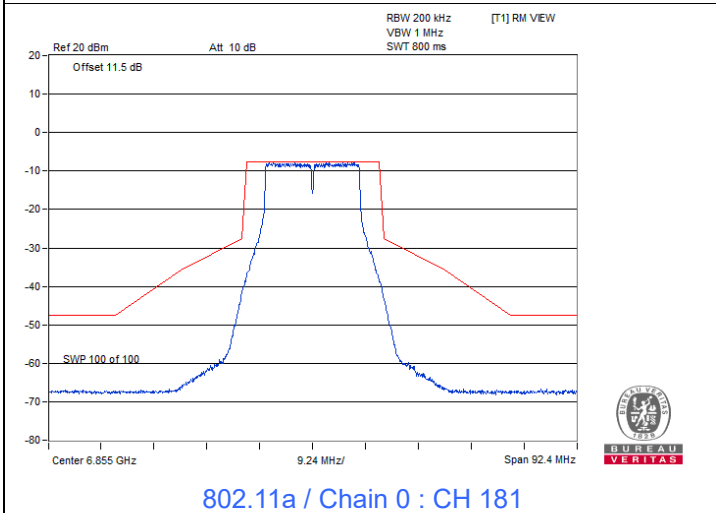
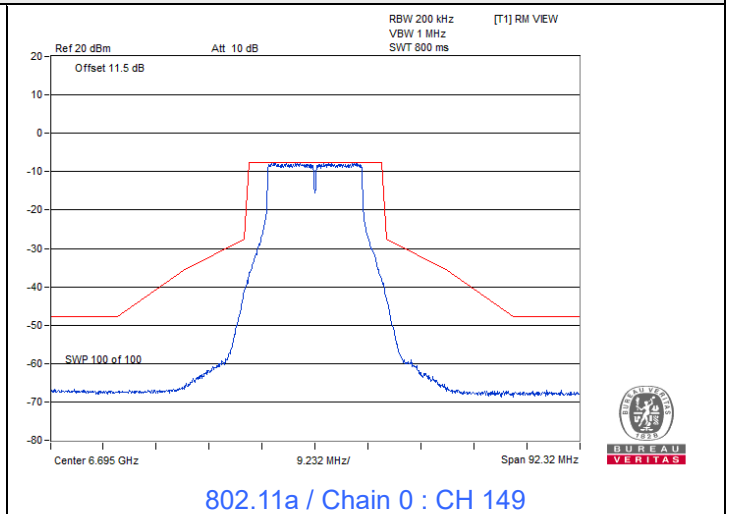
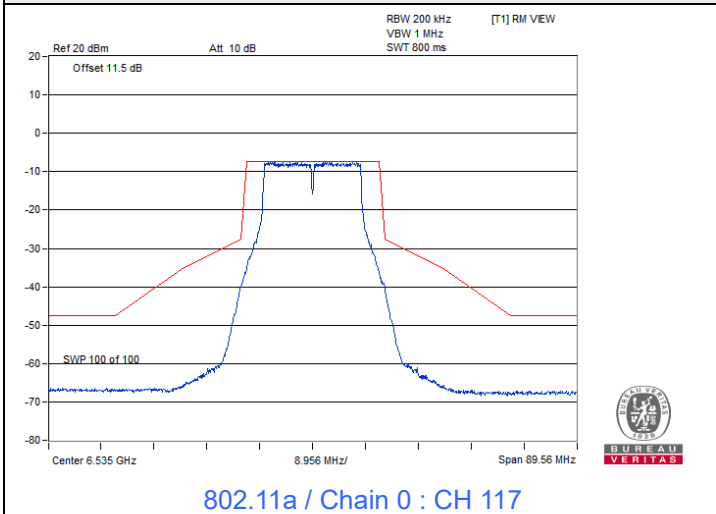
Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang
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### NSS1

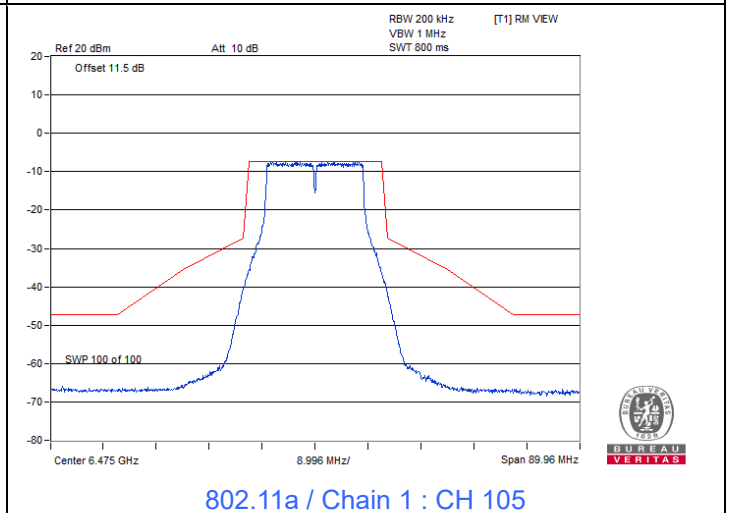
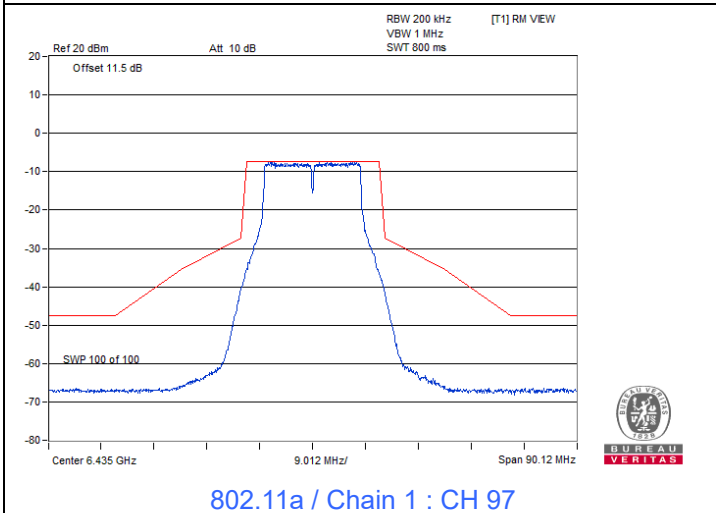
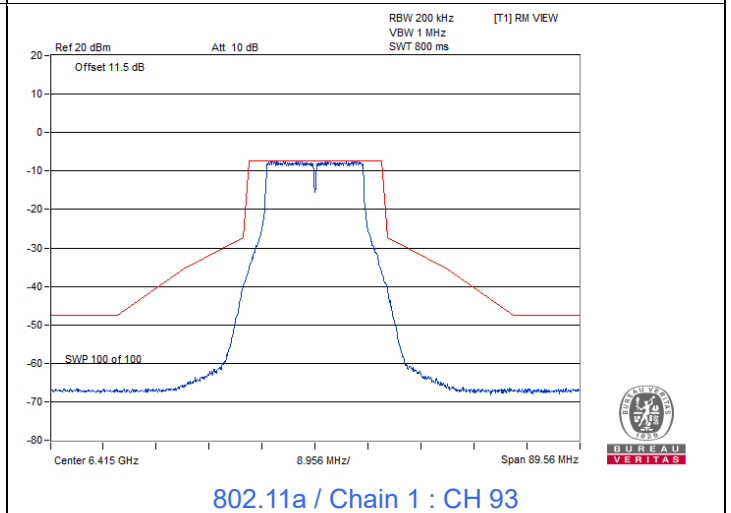
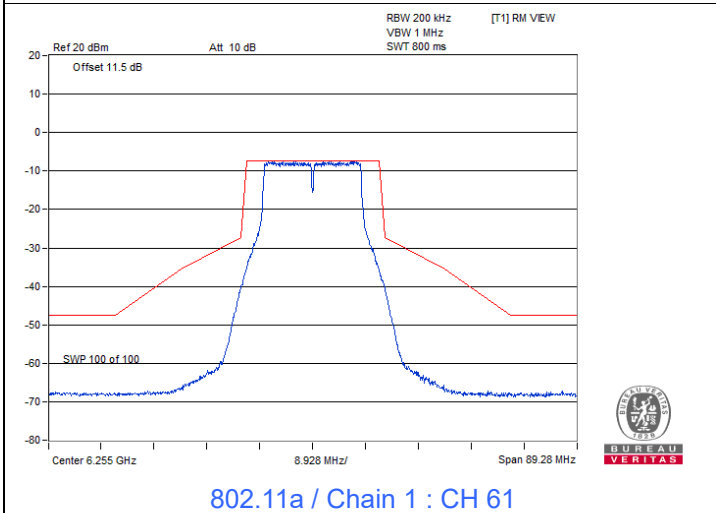
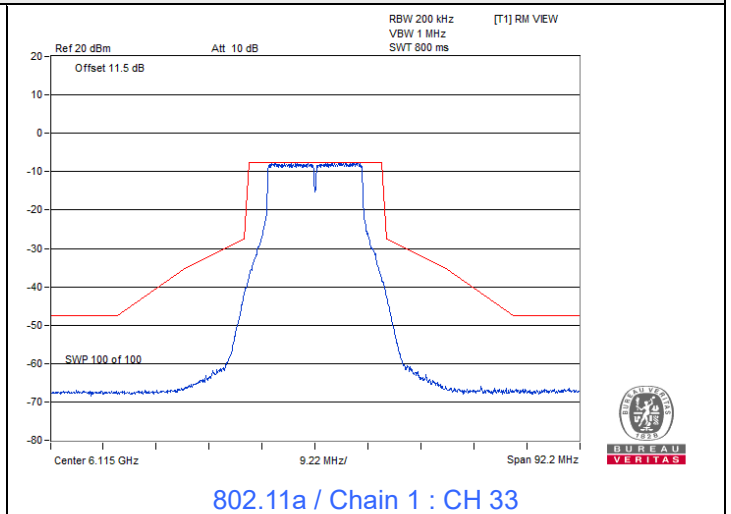
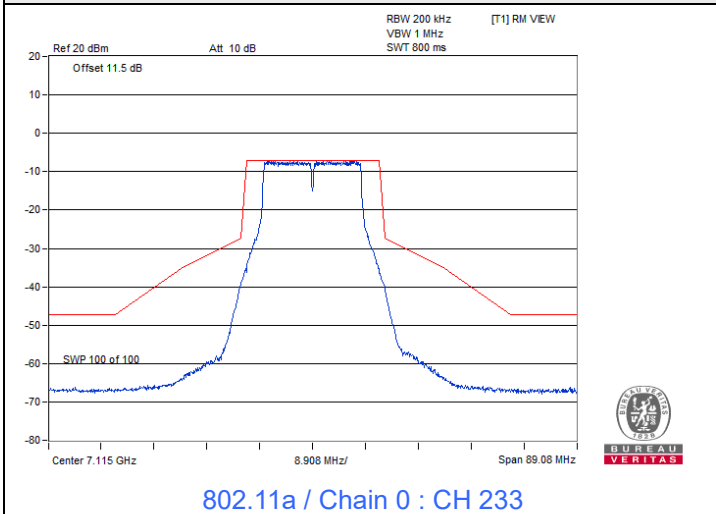
#### 802.11a



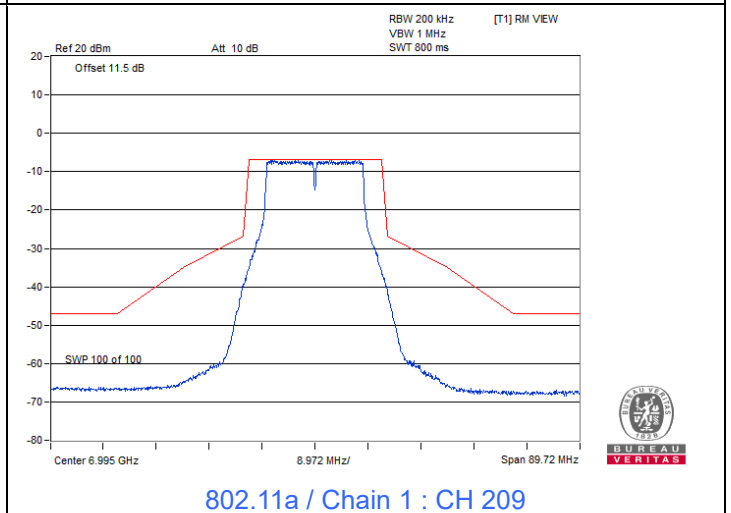
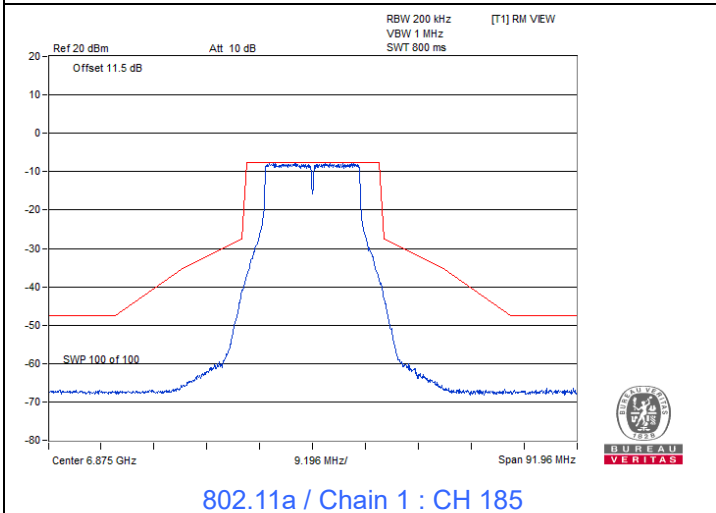
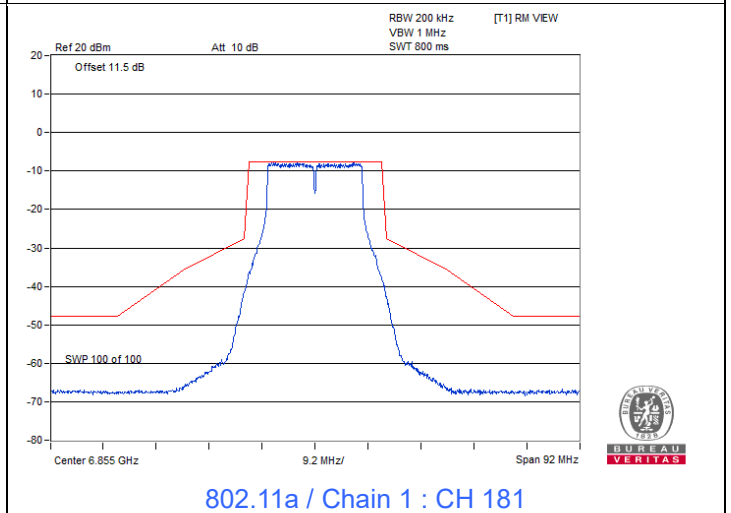
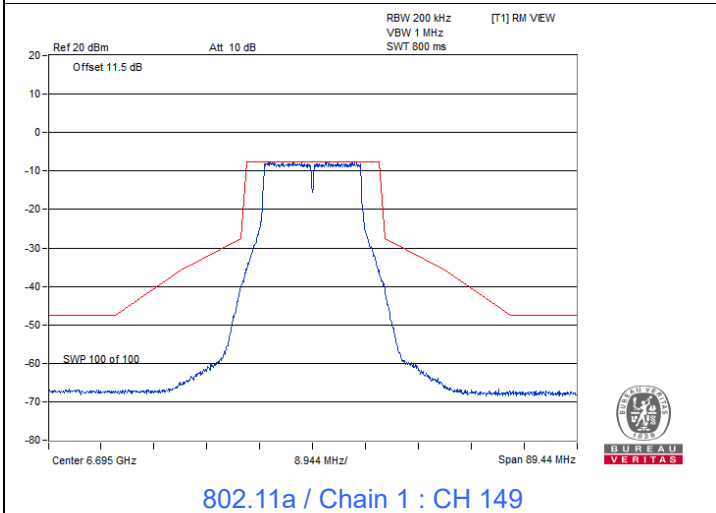
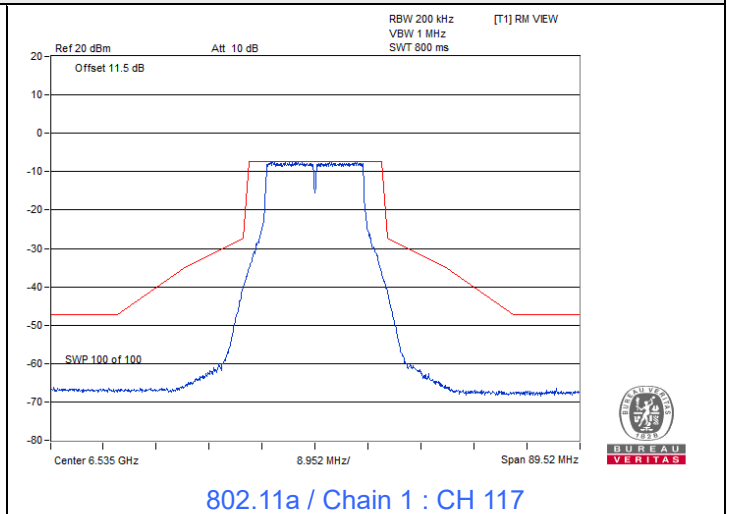
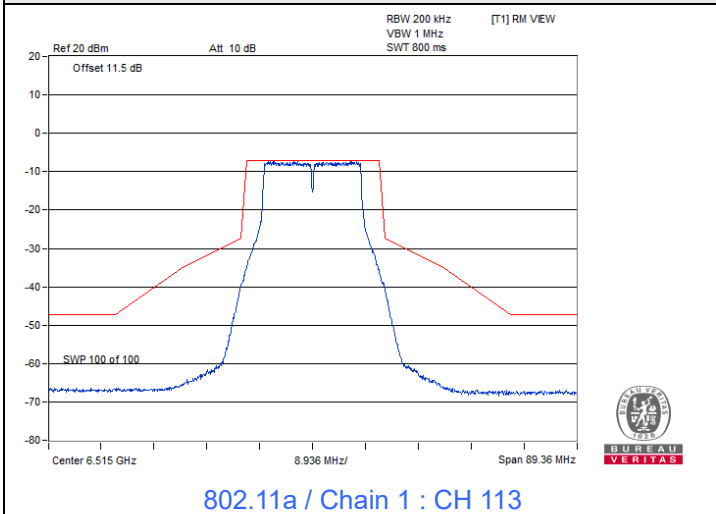
### Spectrum Plot



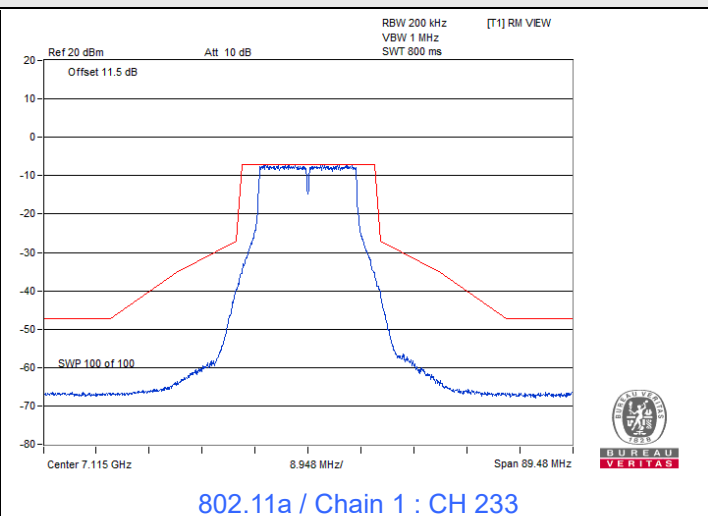
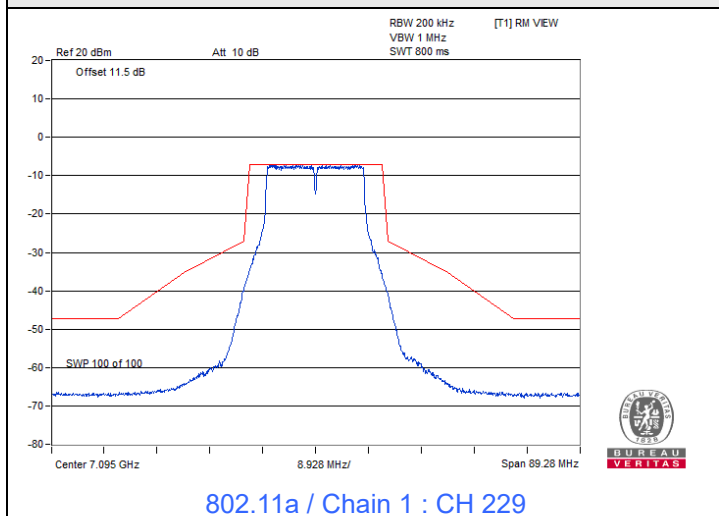
### Spectrum Plot



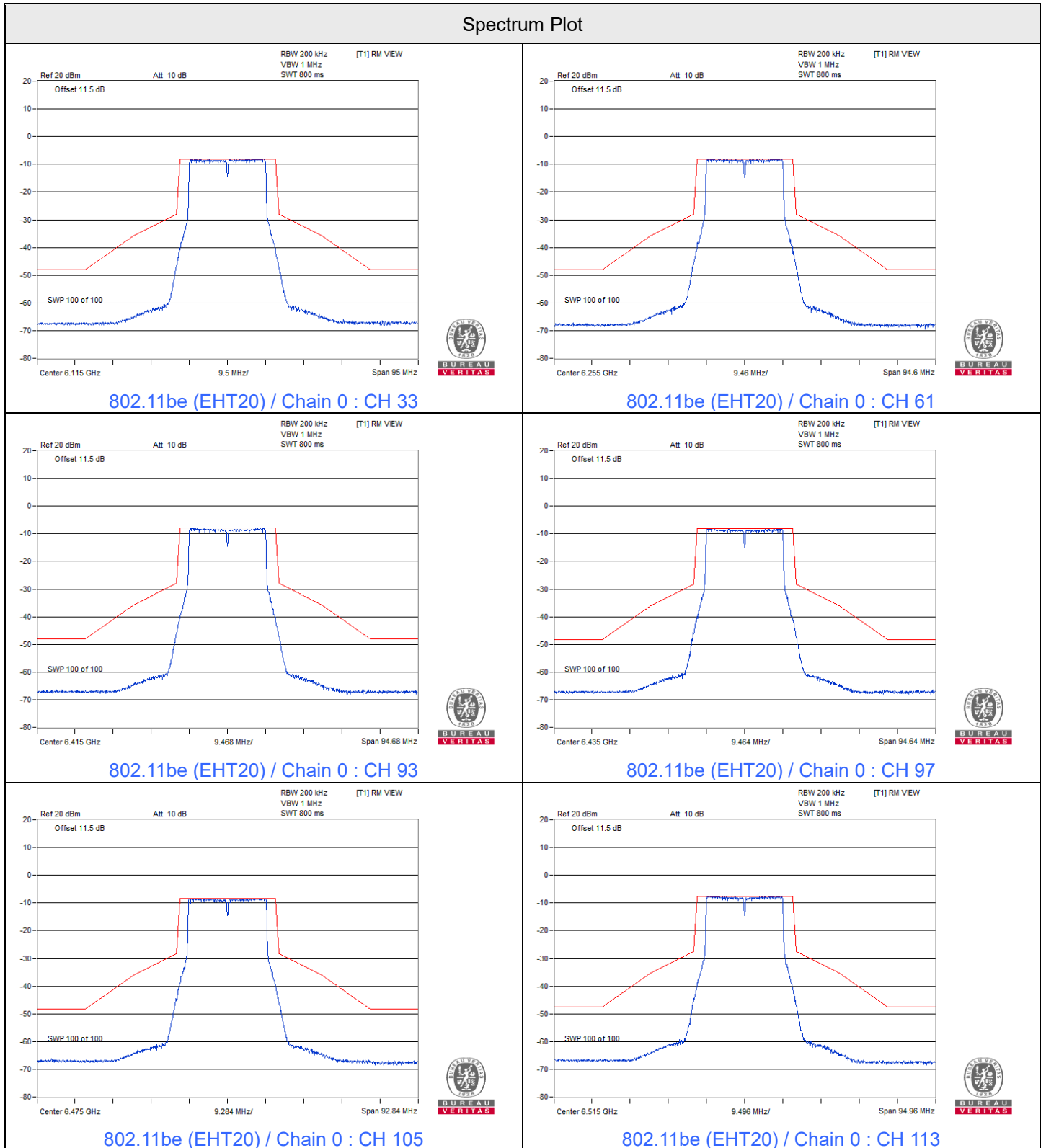
### Spectrum Plot



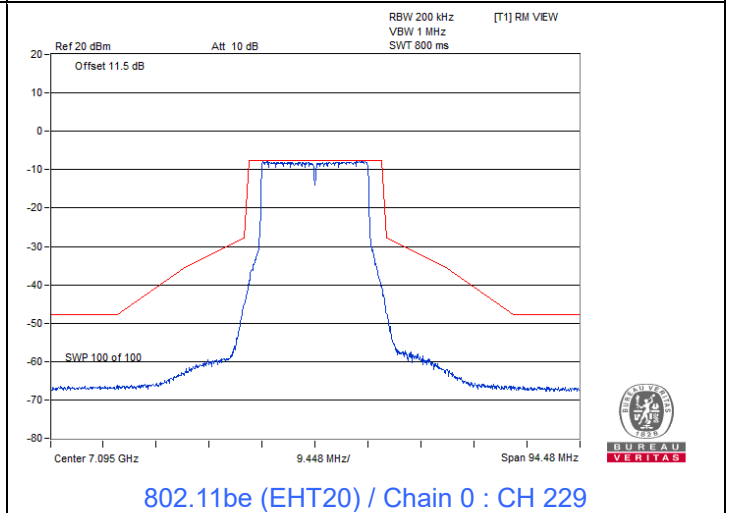
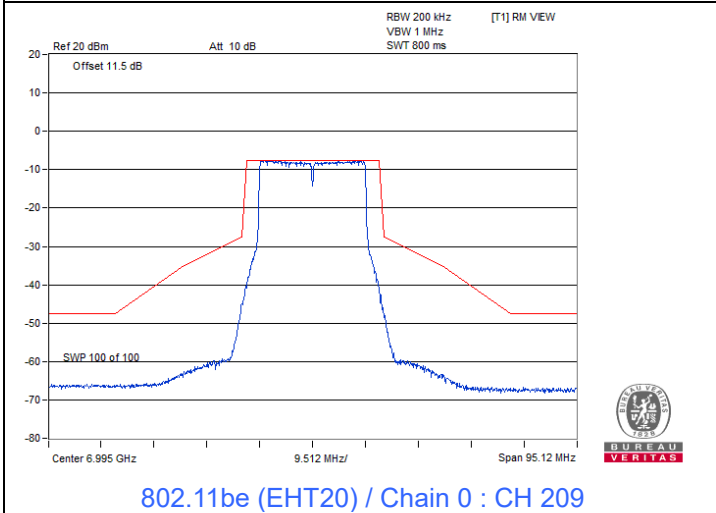
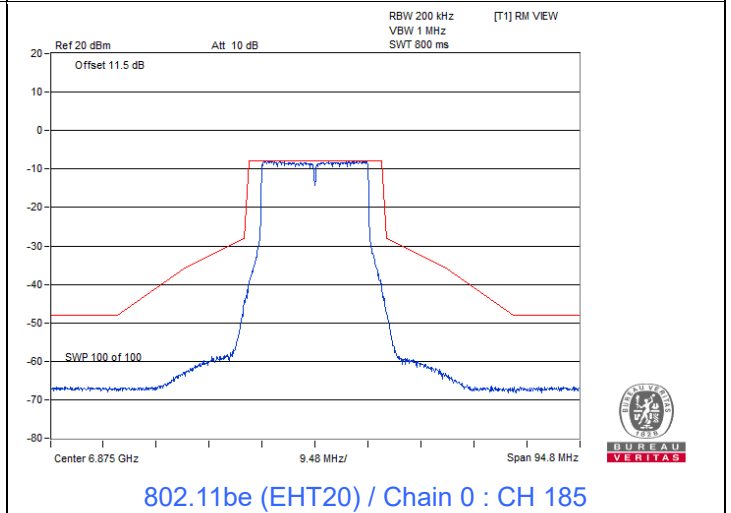
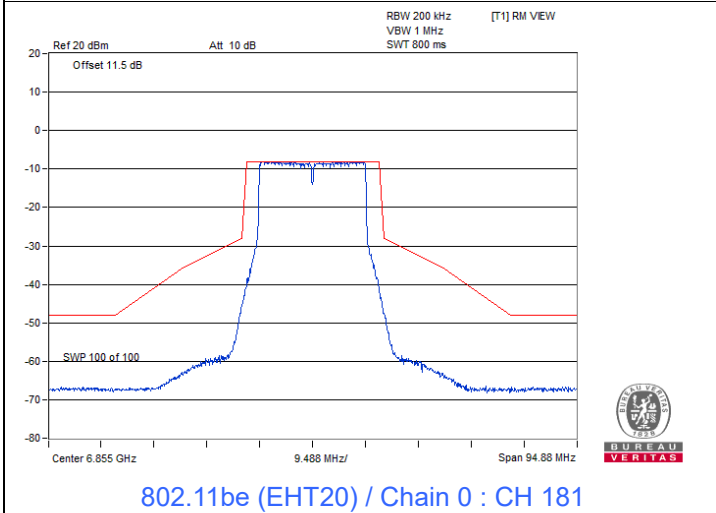
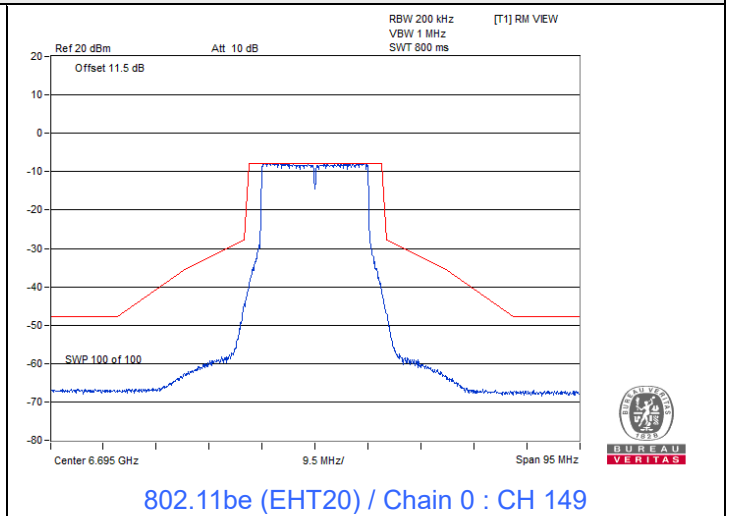
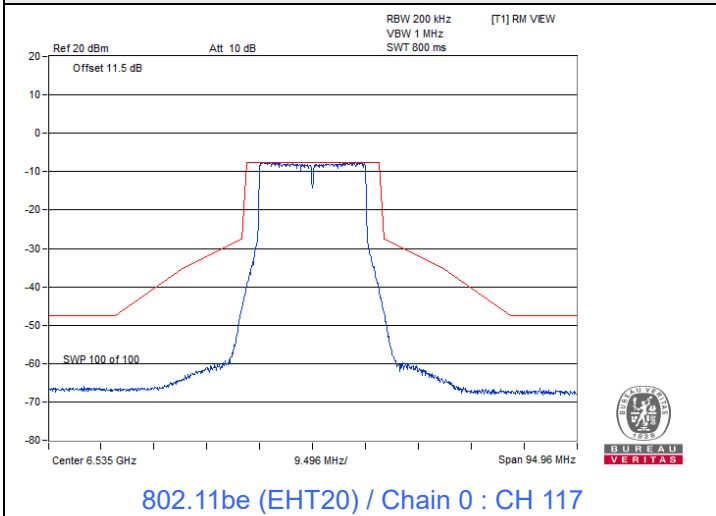
### Spectrum Plot



802.11be (EHT20)

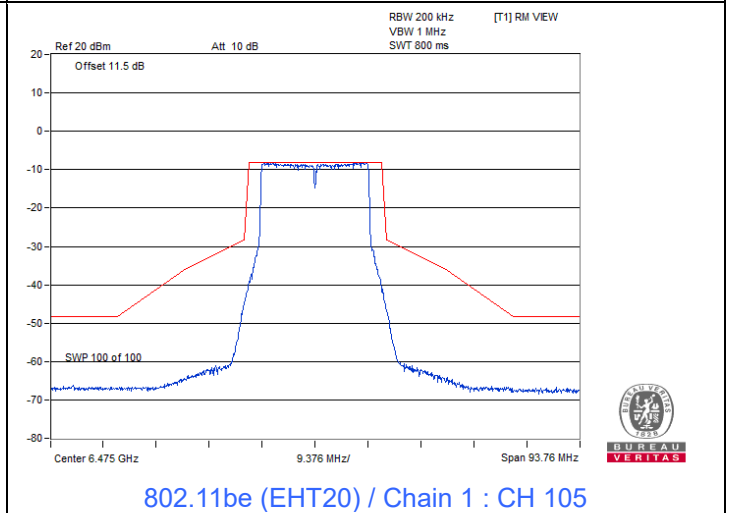
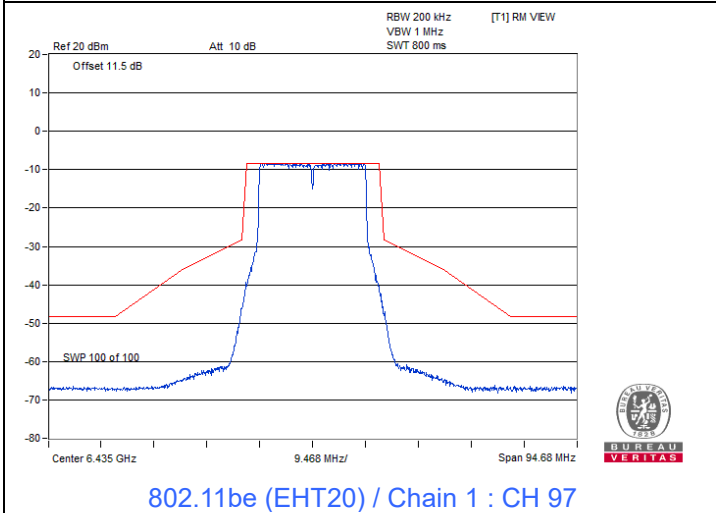
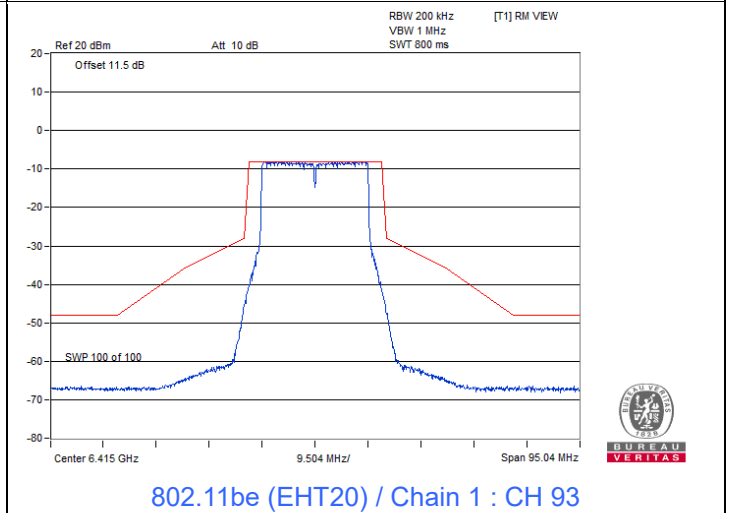
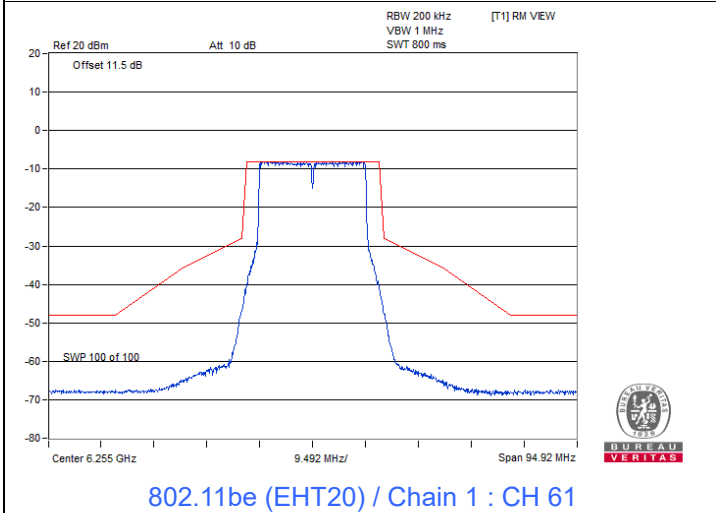
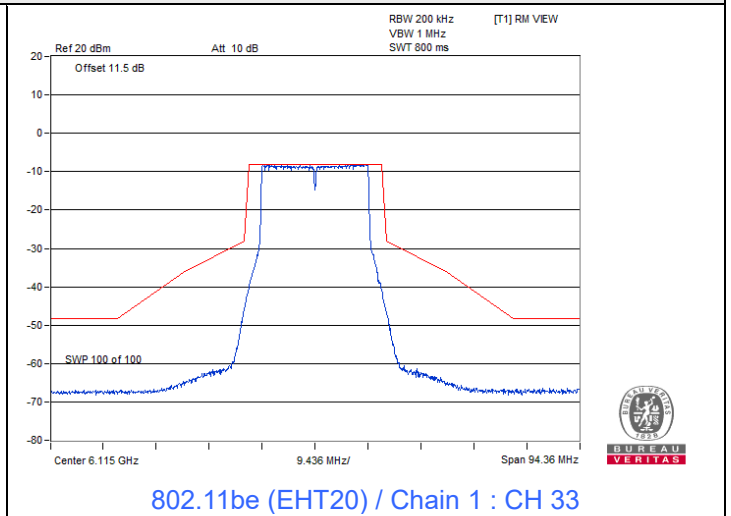
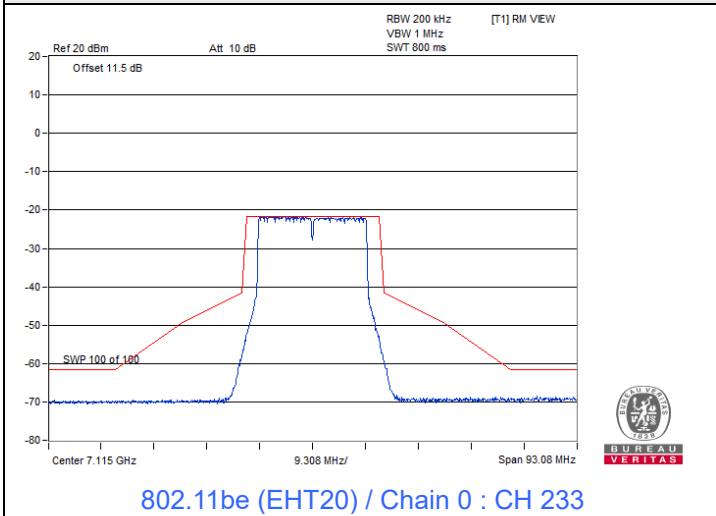


### Spectrum Plot

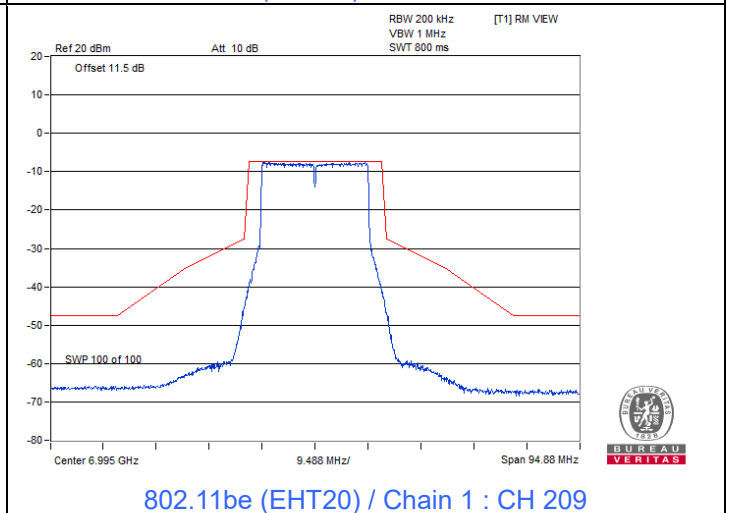
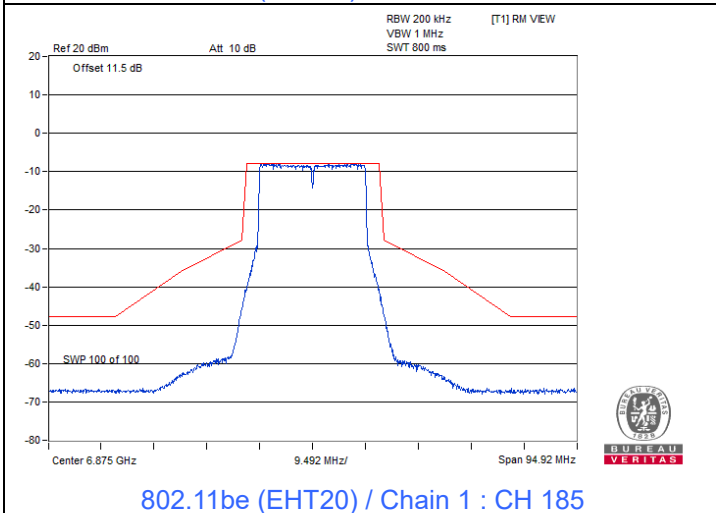
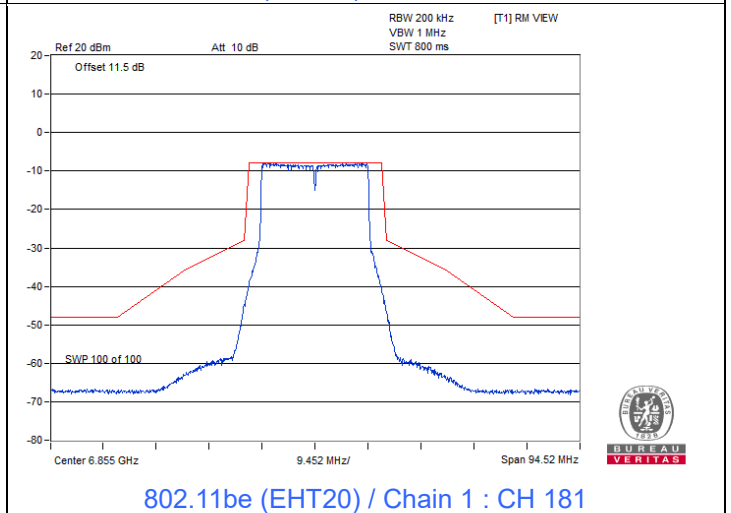
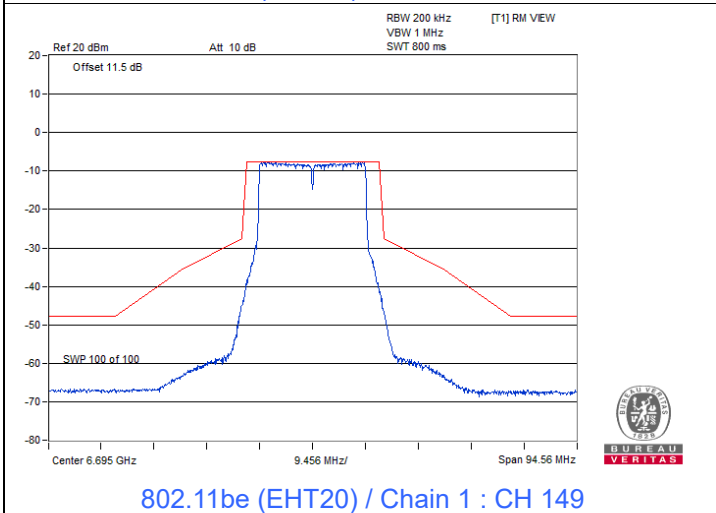
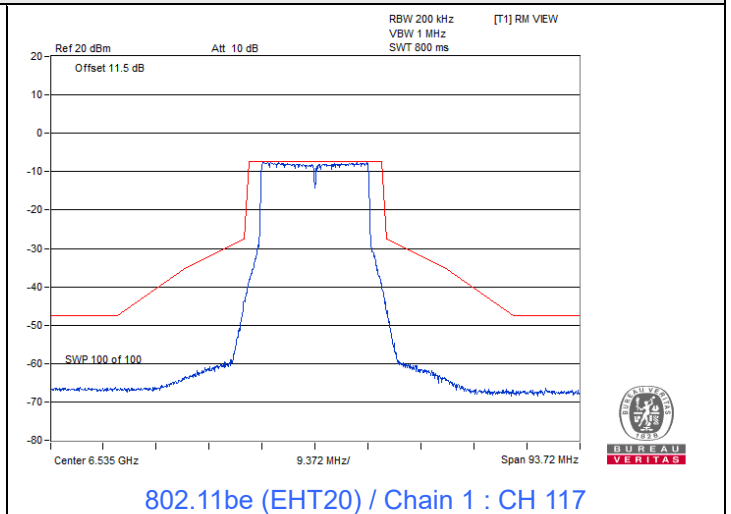
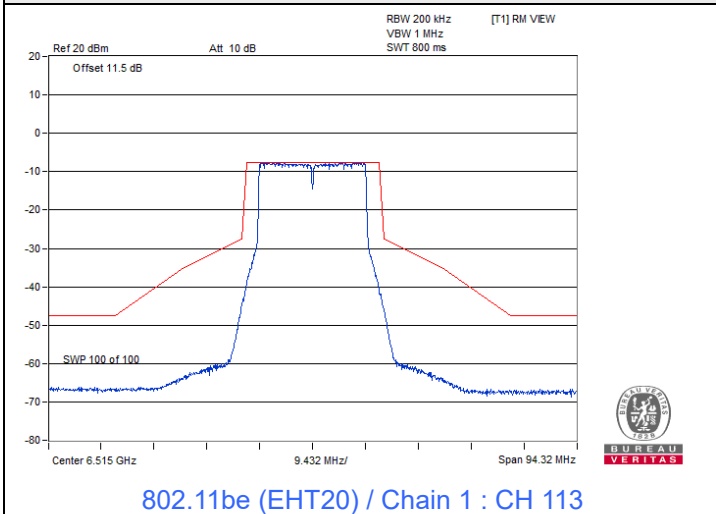




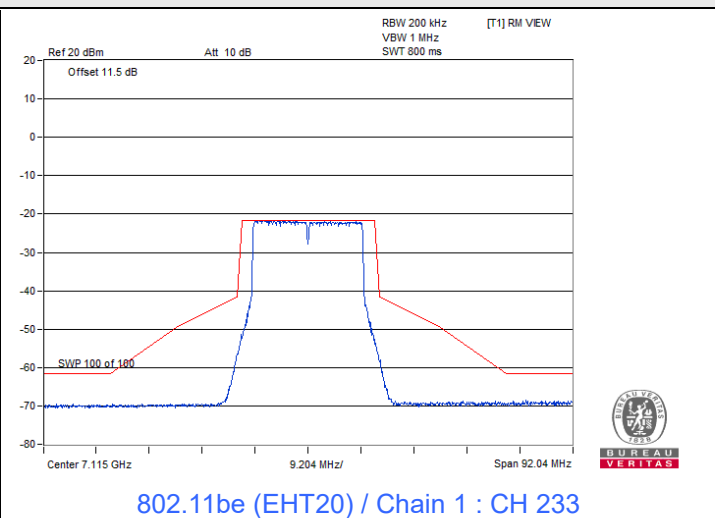
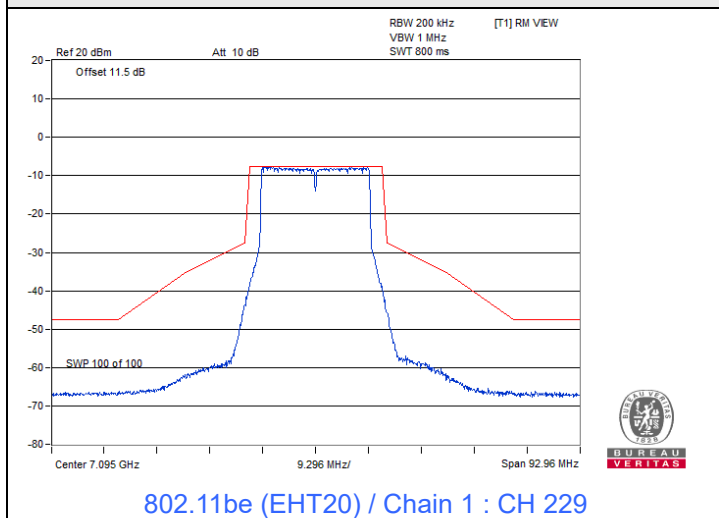
### Spectrum Plot



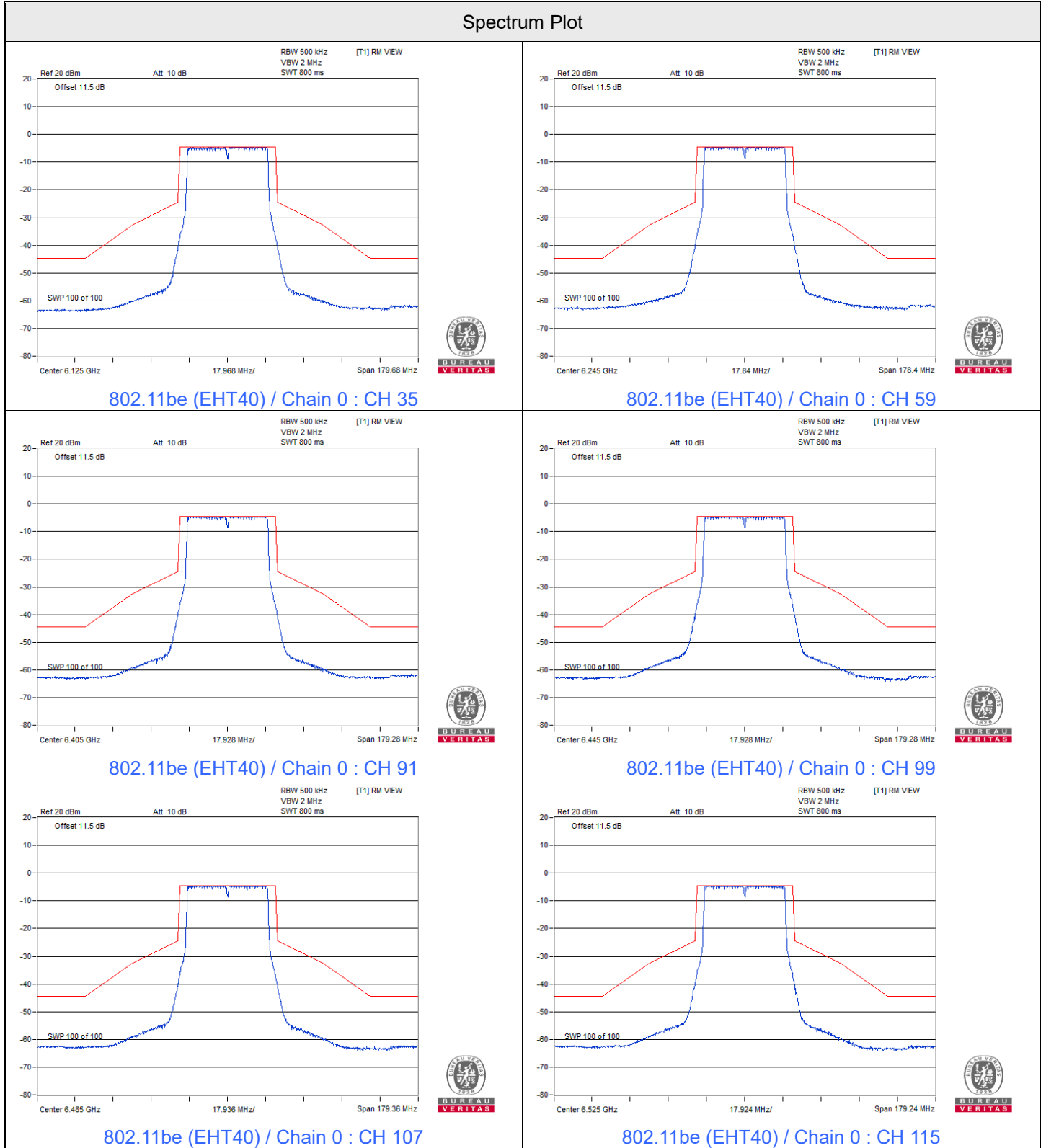
### Spectrum Plot



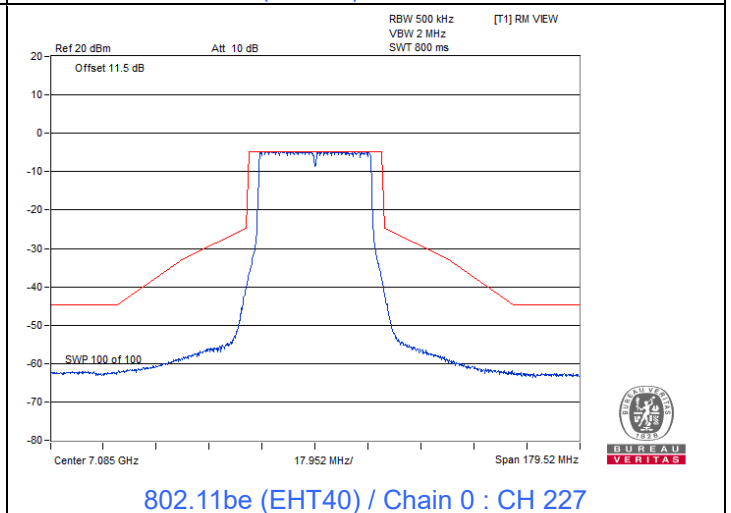
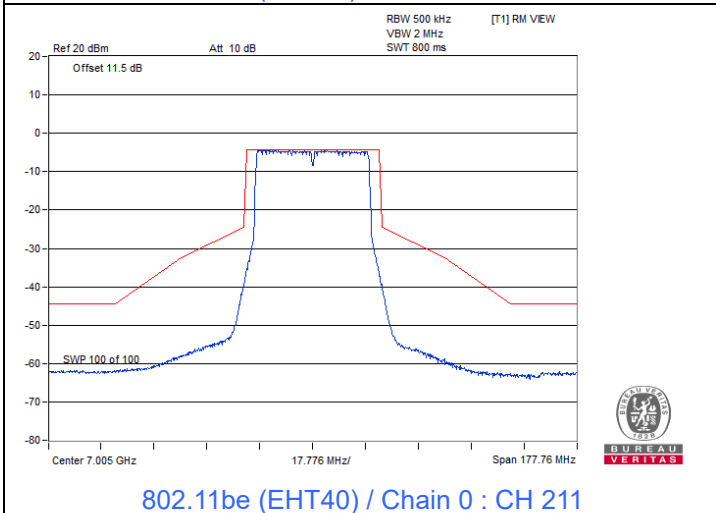
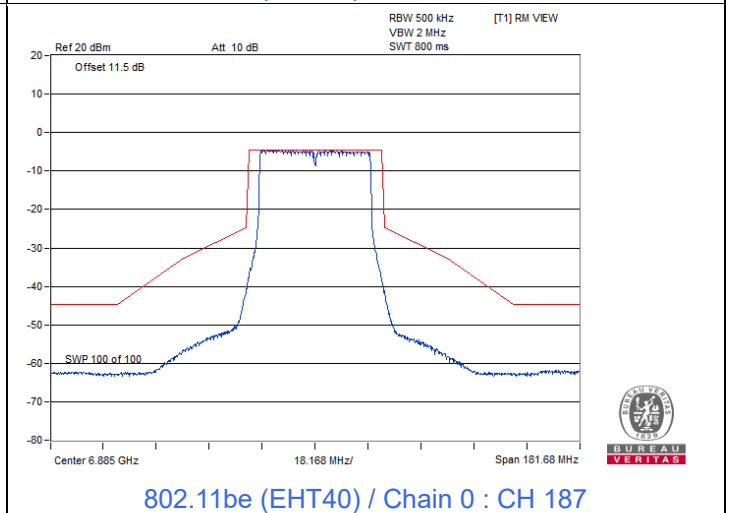
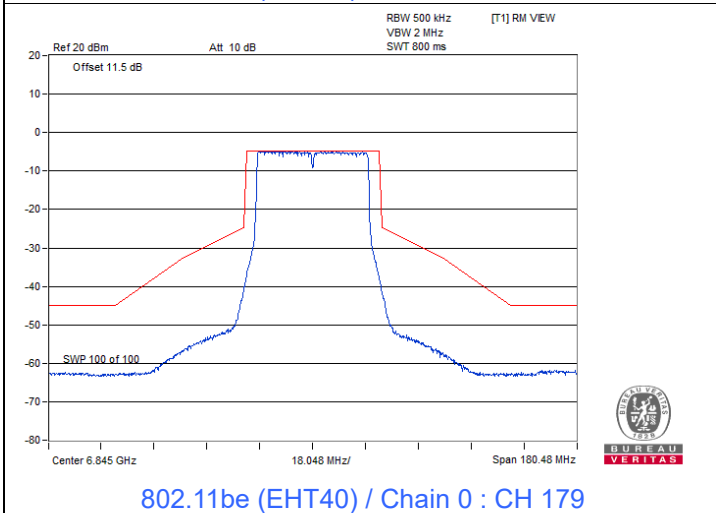
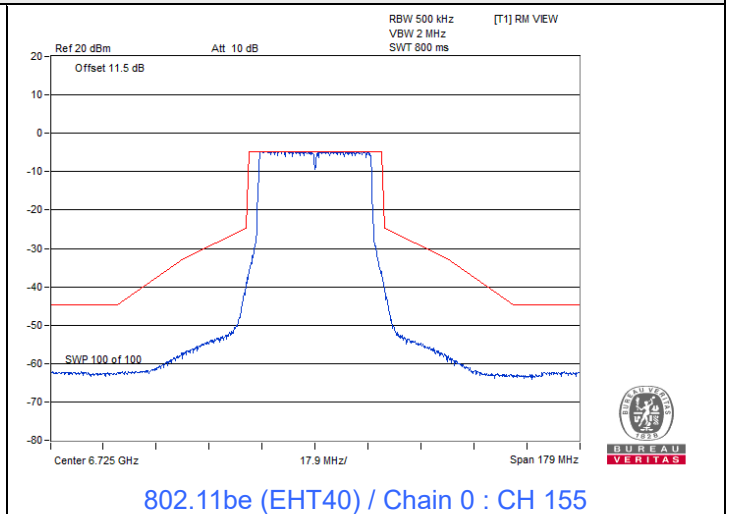
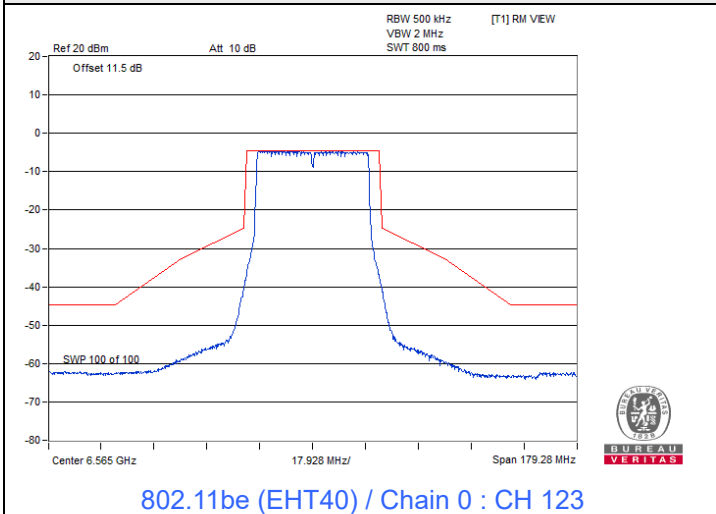
### Spectrum Plot



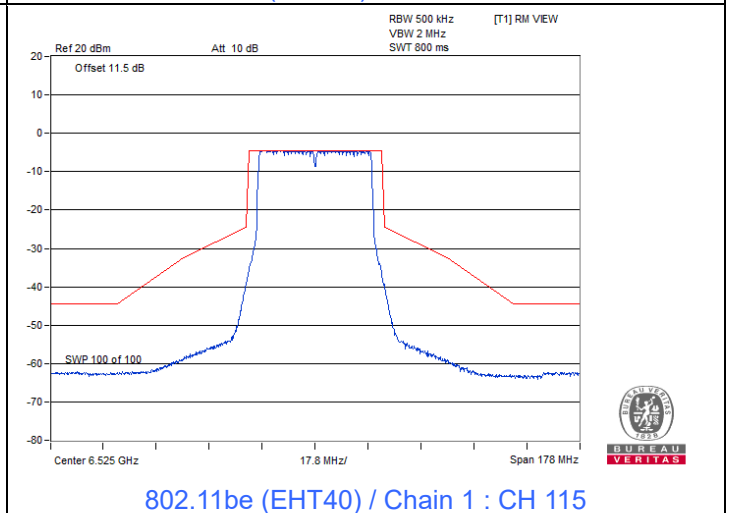
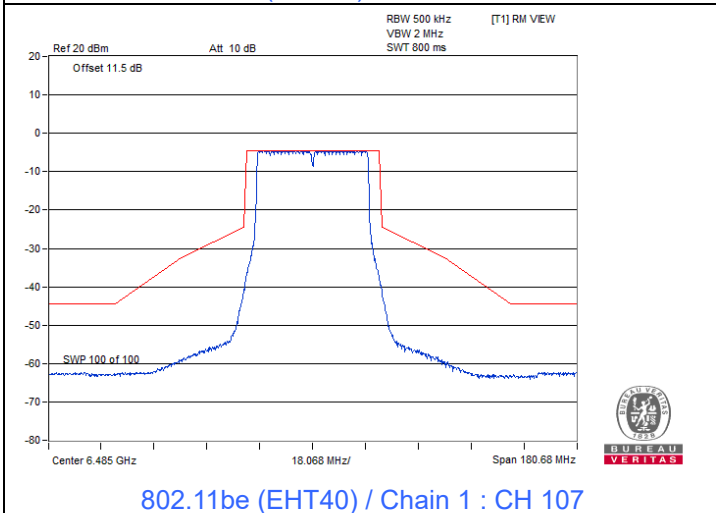
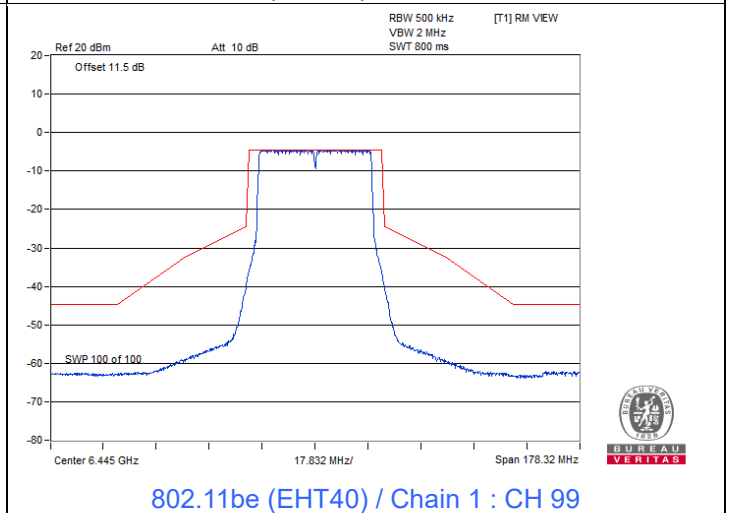
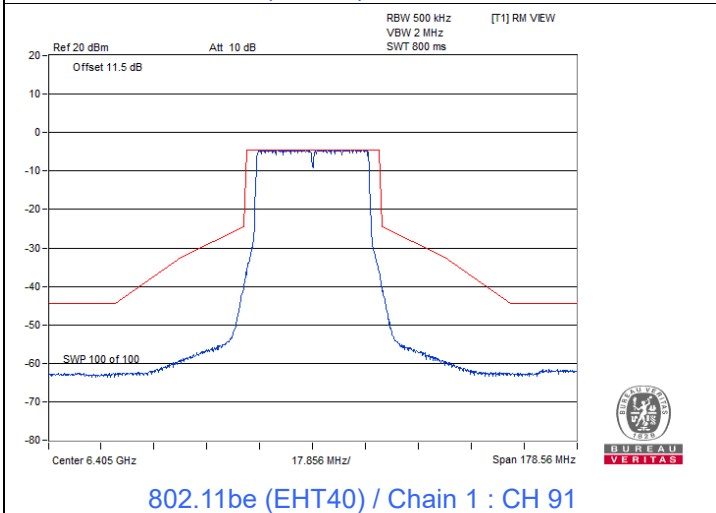
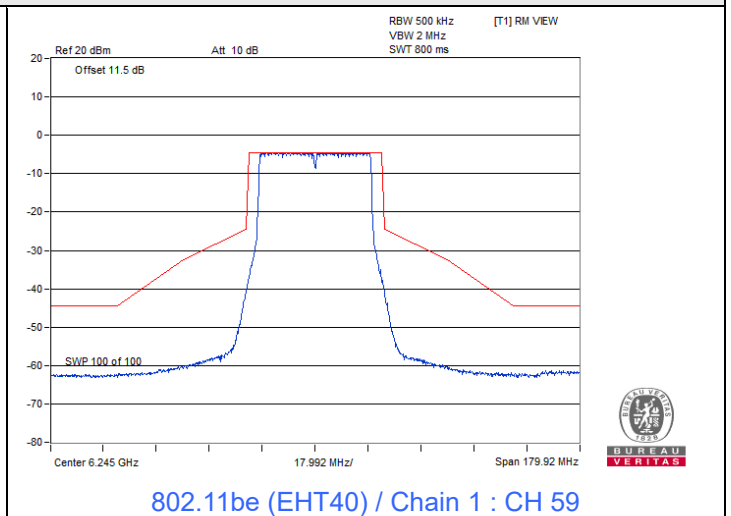
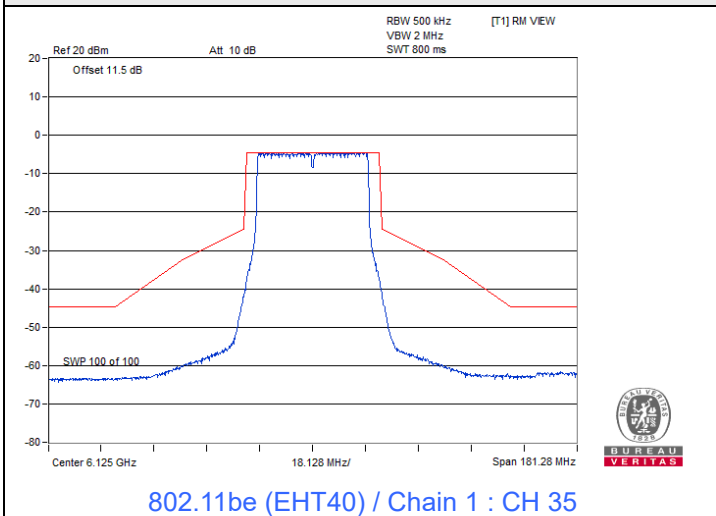
802.11be (EHT40)



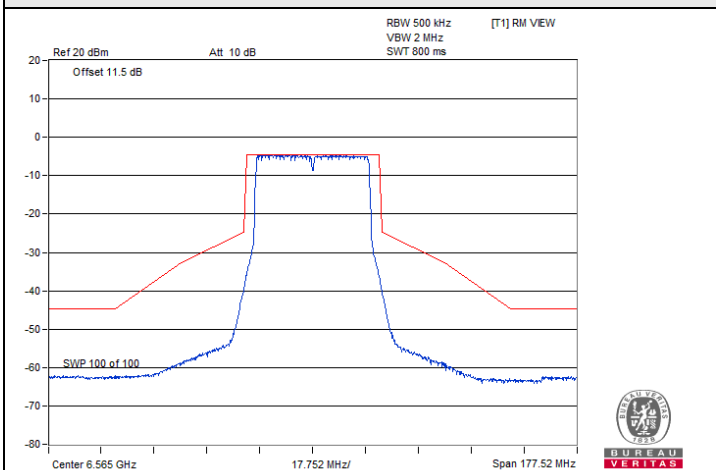
### Spectrum Plot



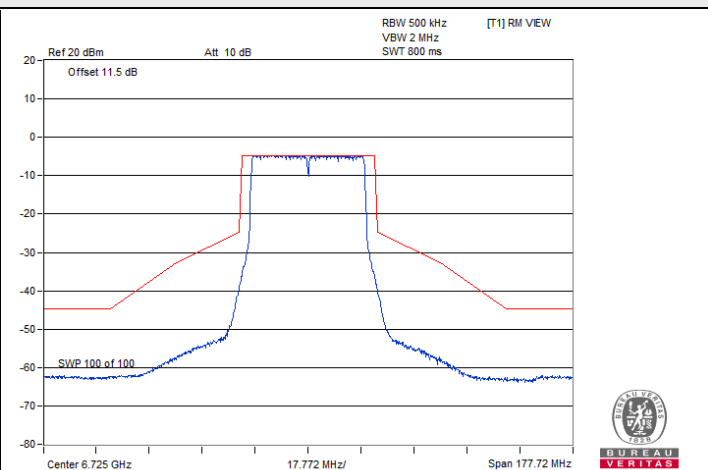
### Spectrum Plot



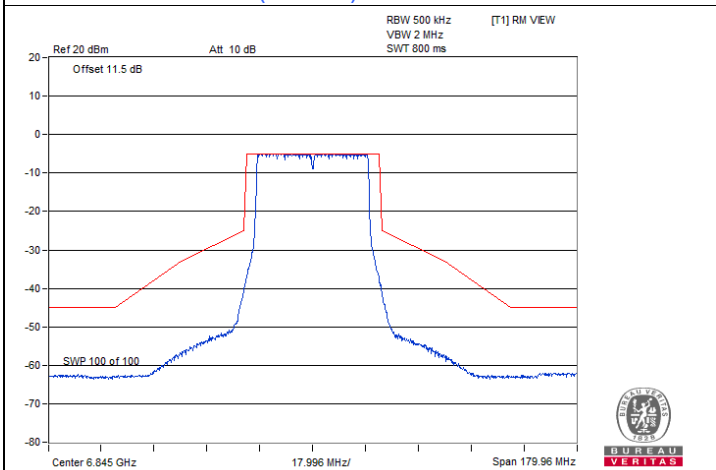
### Spectrum Plot



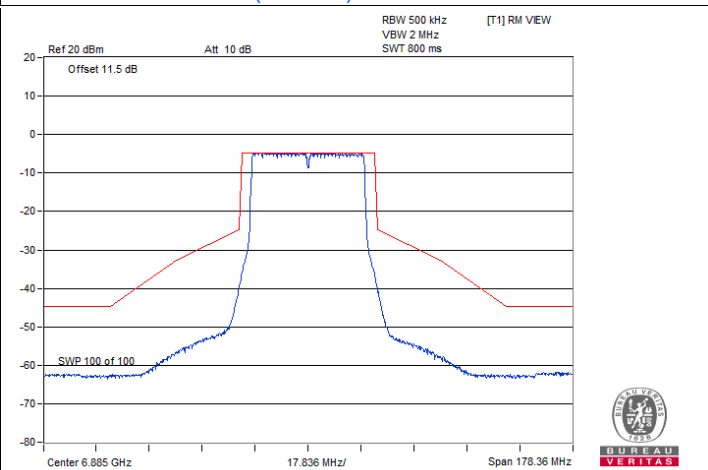
802.11be (EHT40) / Chain 1 : CH 123



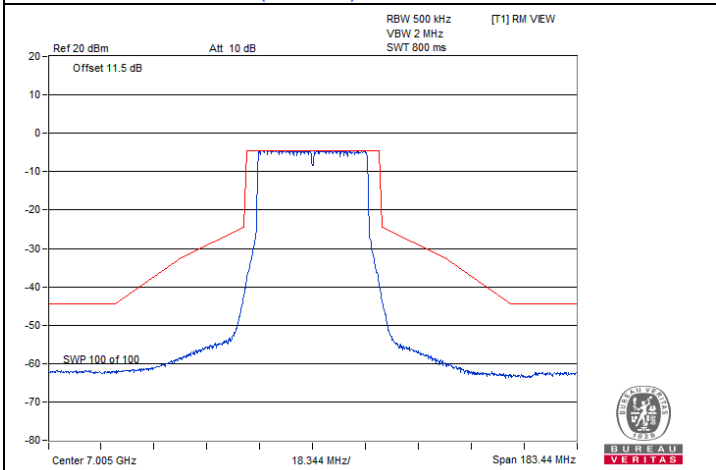
802.11be (EHT40) / Chain 1 : CH 155



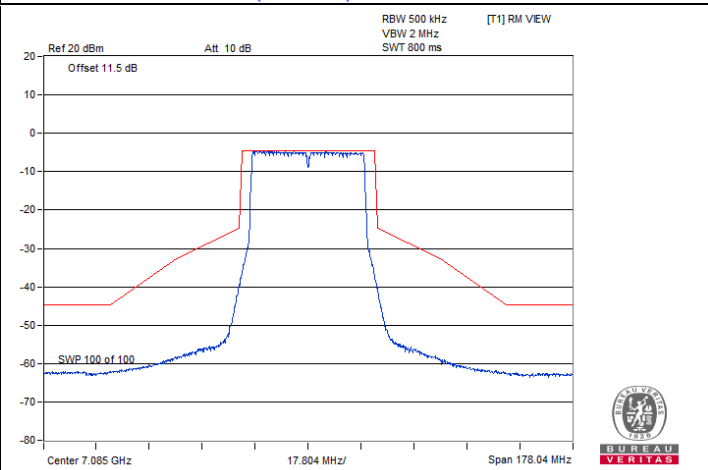
802.11be (EHT40) / Chain 1 : CH 179



802.11be (EHT40) / Chain 1 : CH 187



802.11be (EHT40) / Chain 1 : CH 211

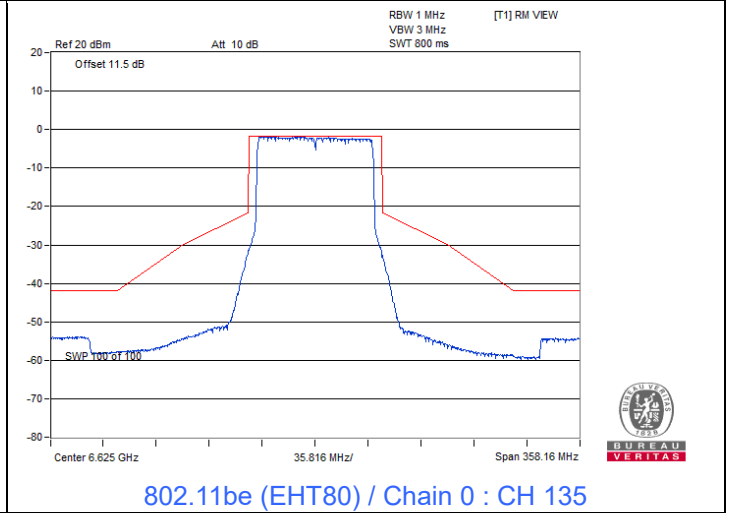
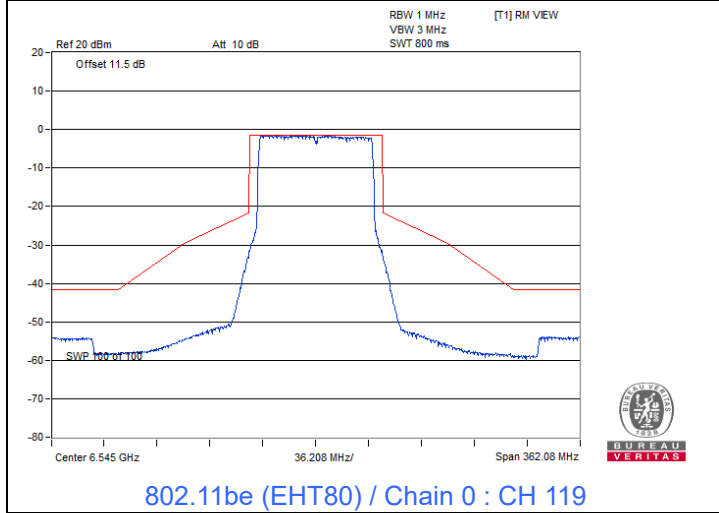
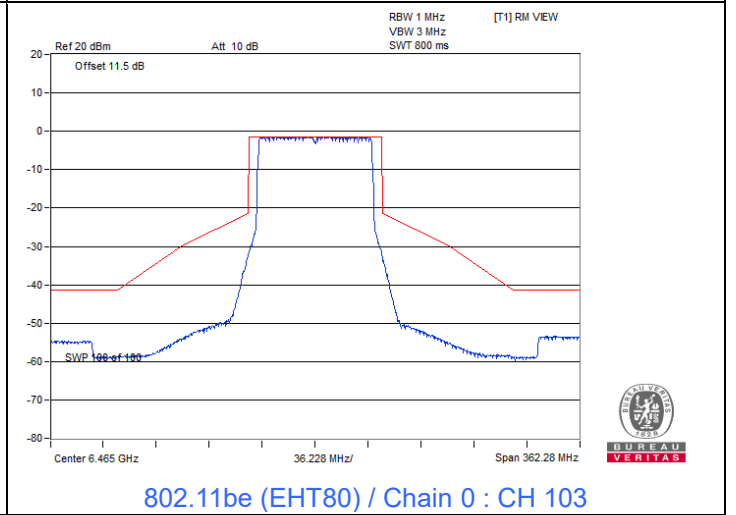
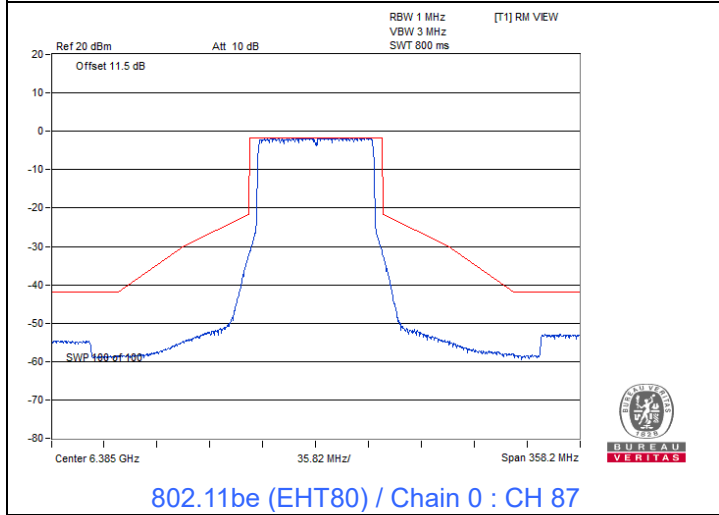
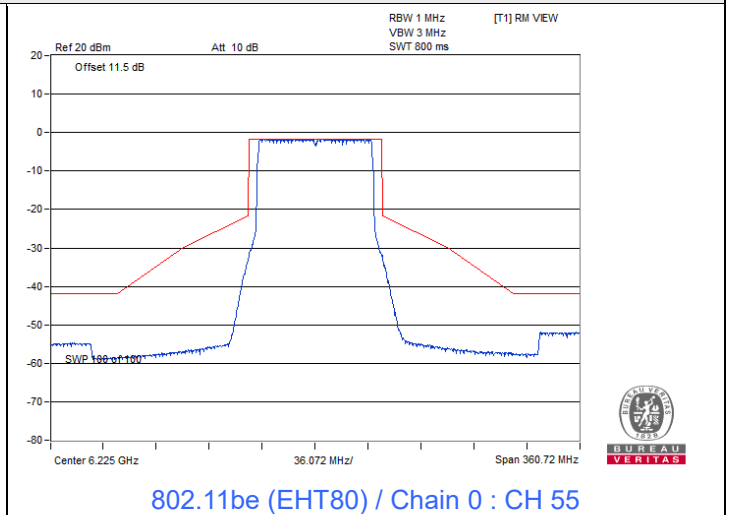
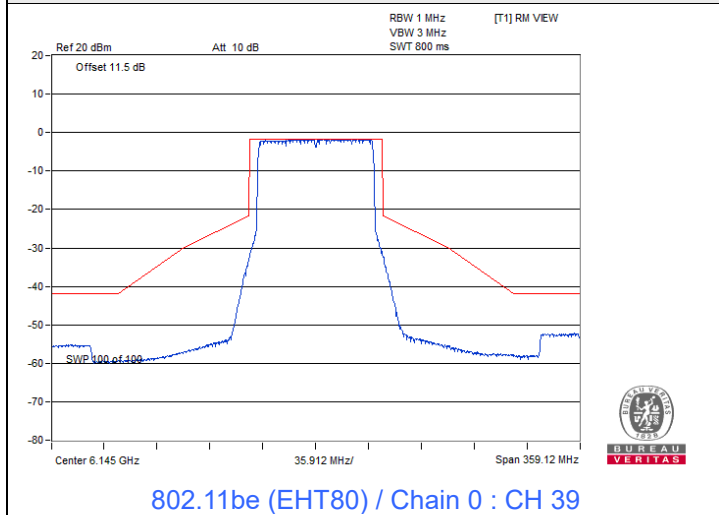


802.11be (EHT40) / Chain 1 : CH 227



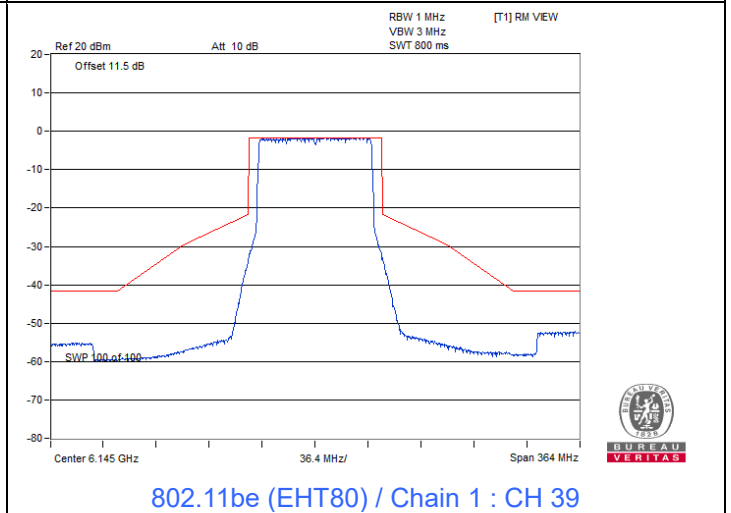
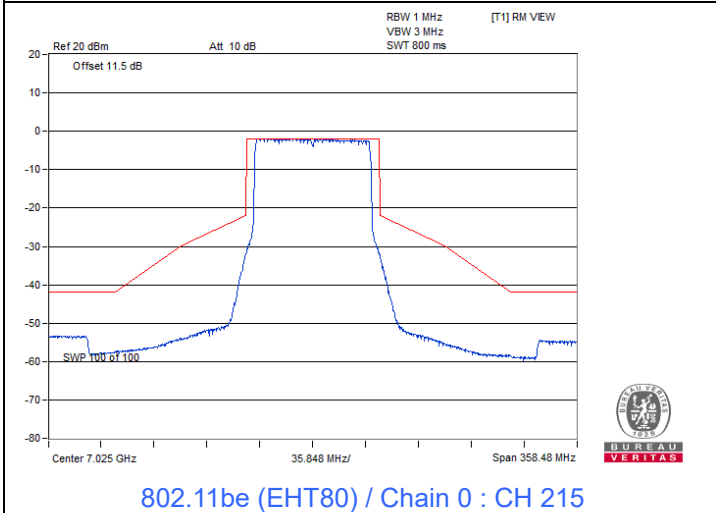
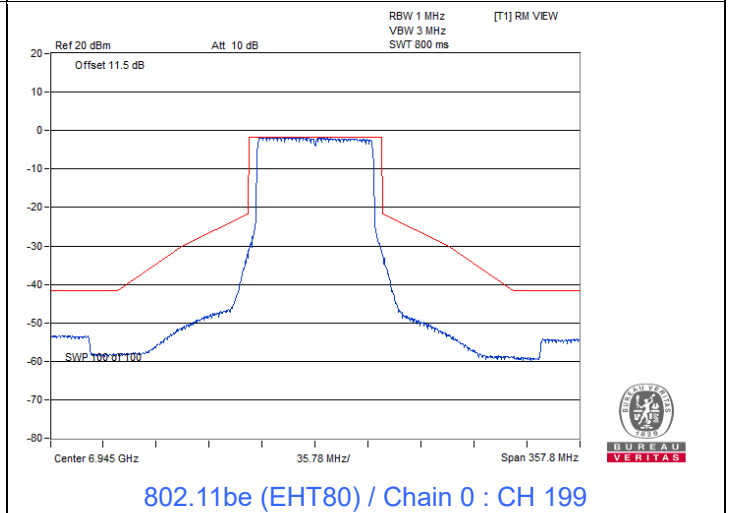
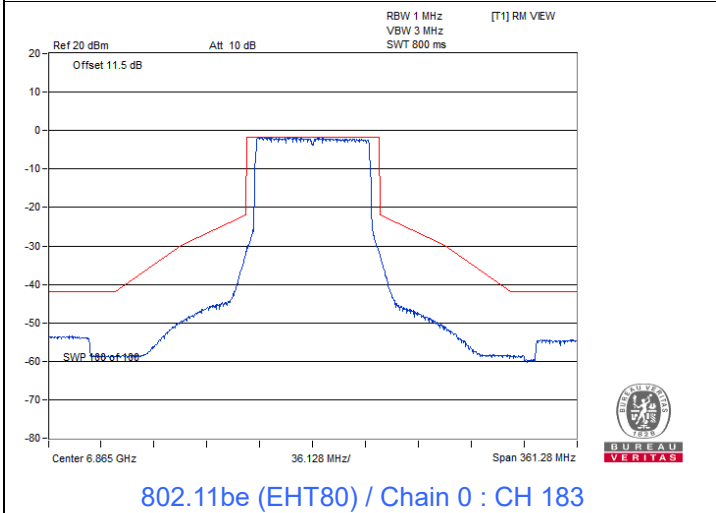
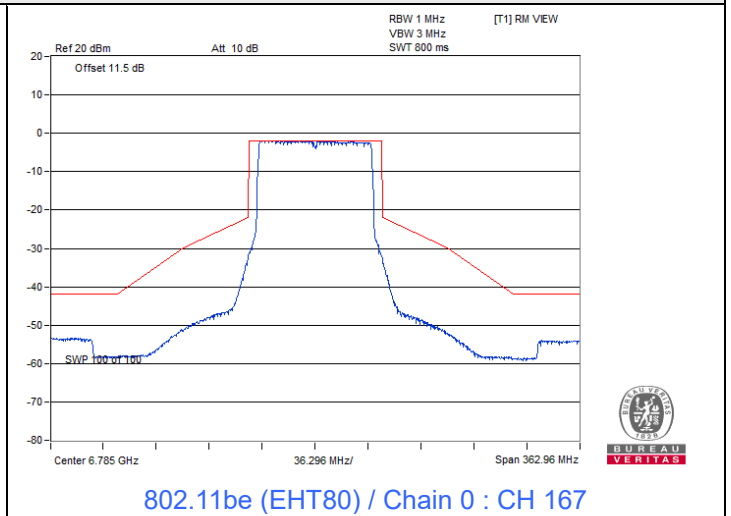
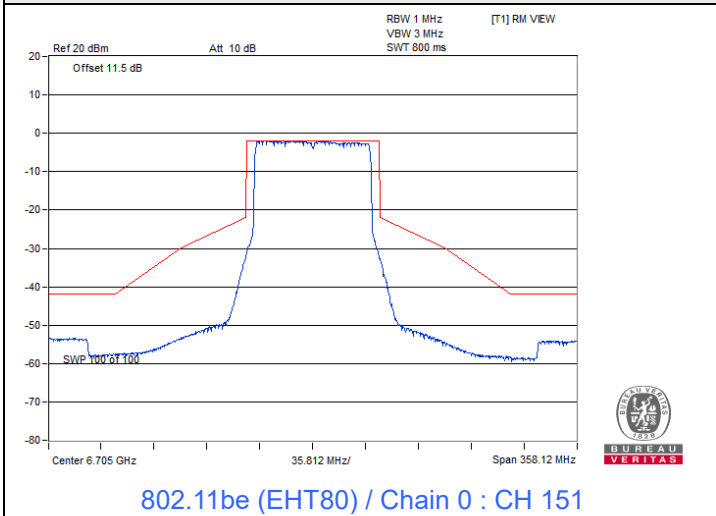
### 802.11be (EHT80)

#### Spectrum Plot

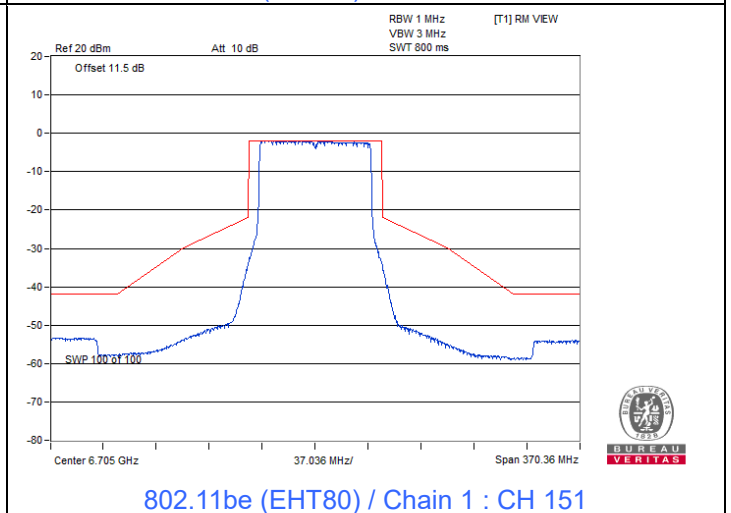
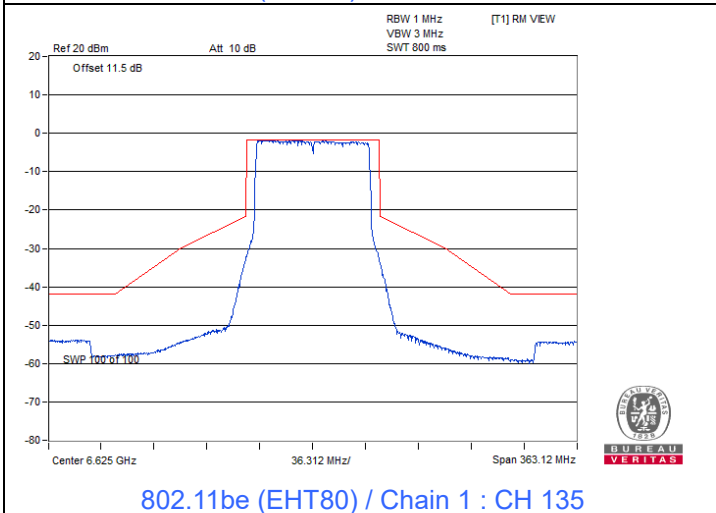
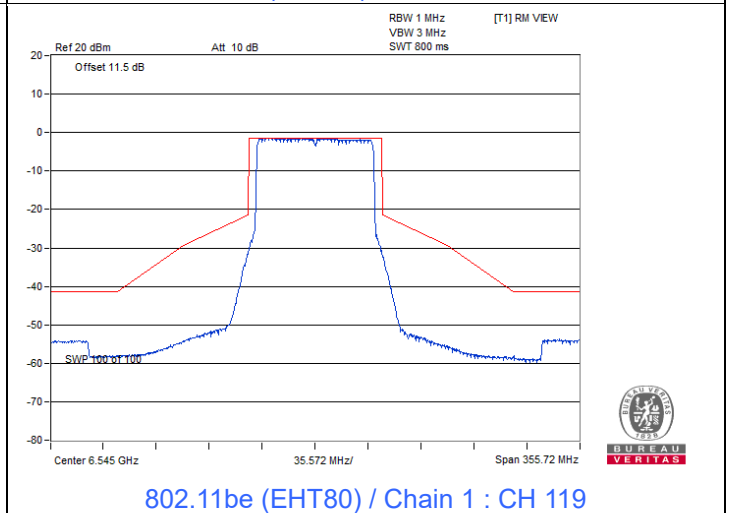
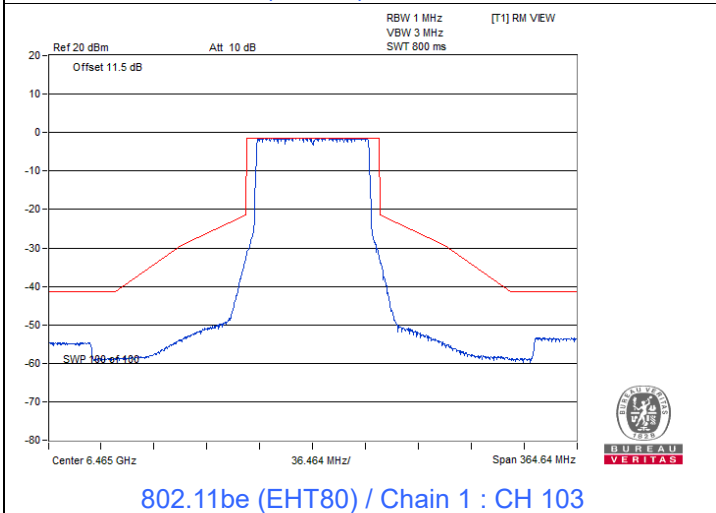
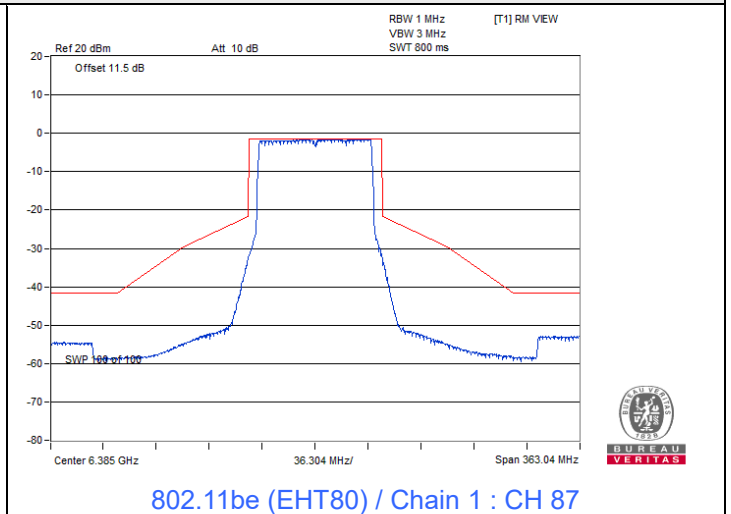
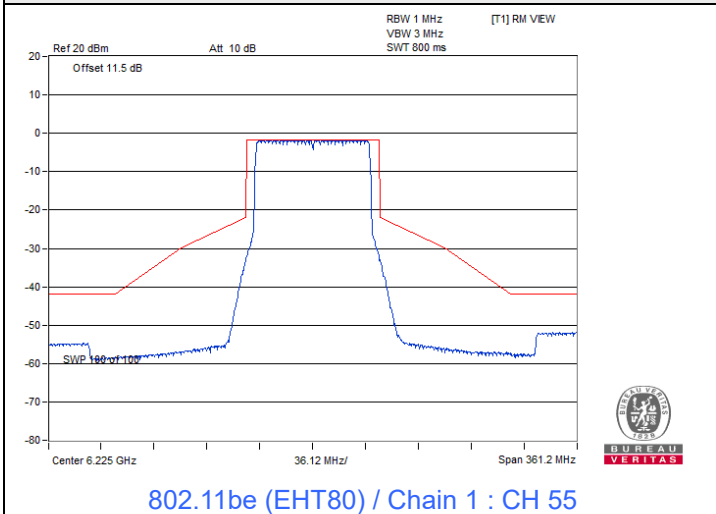




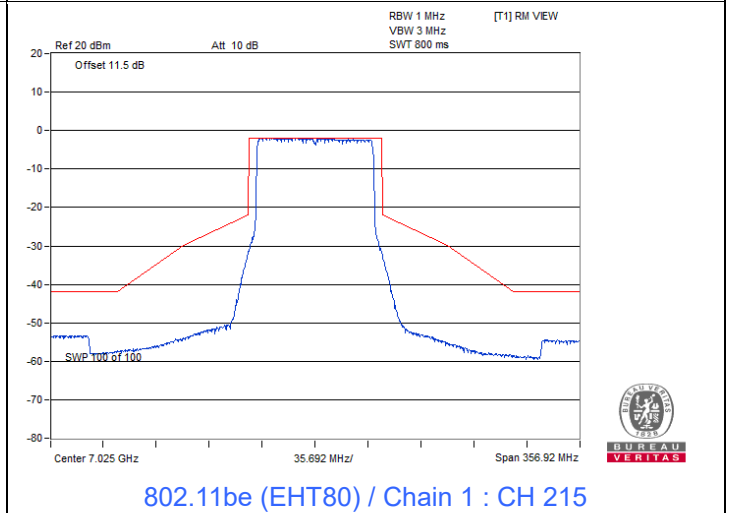
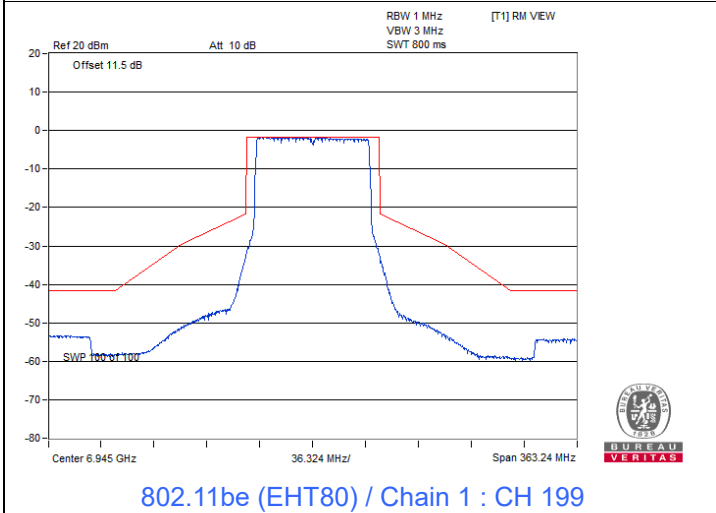
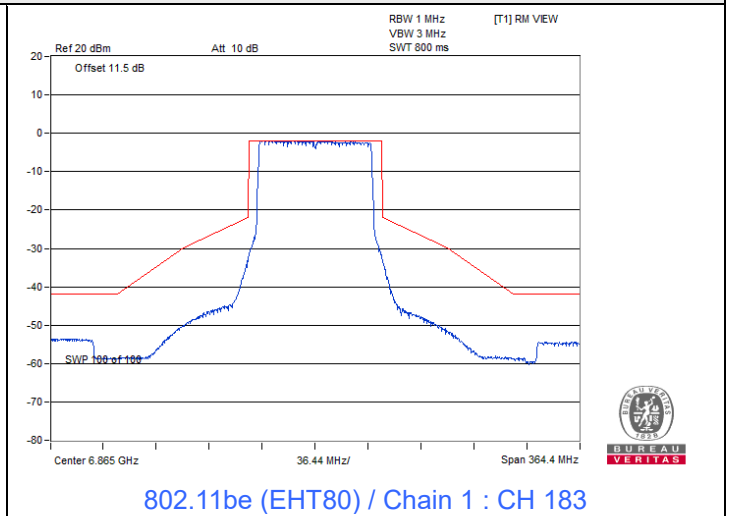
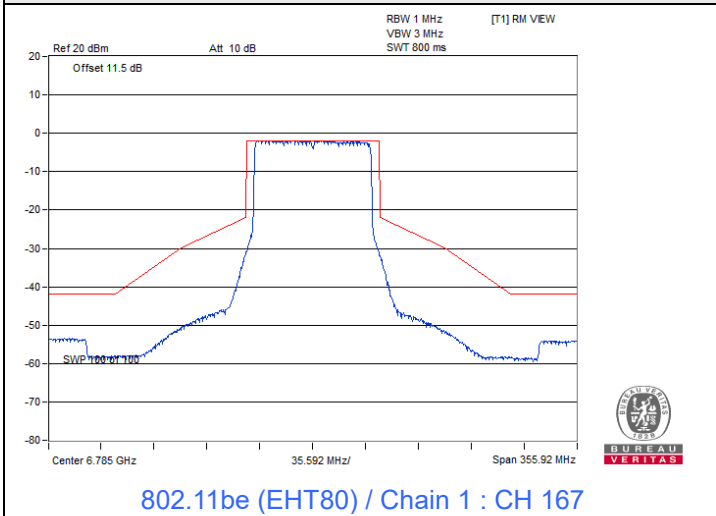
### Spectrum Plot



### Spectrum Plot

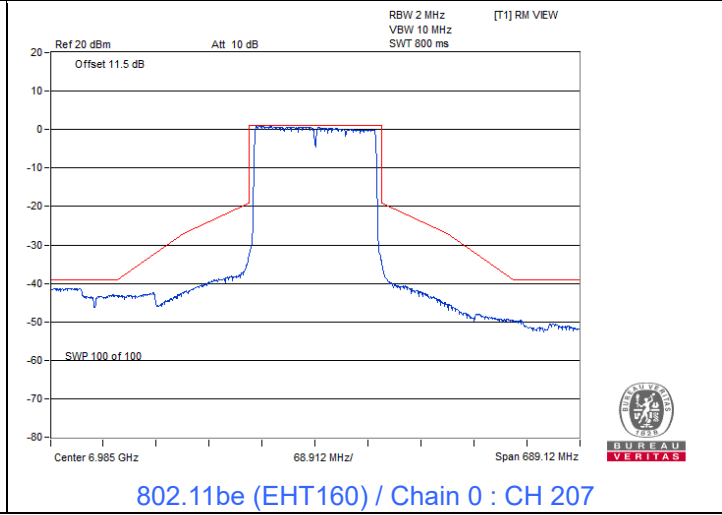
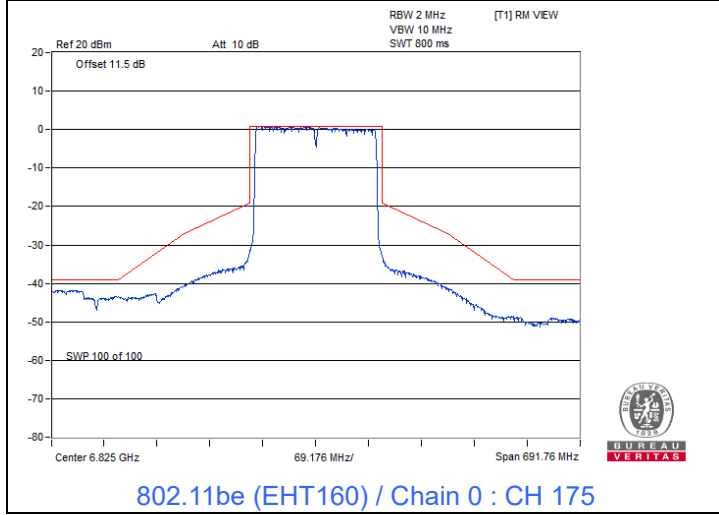
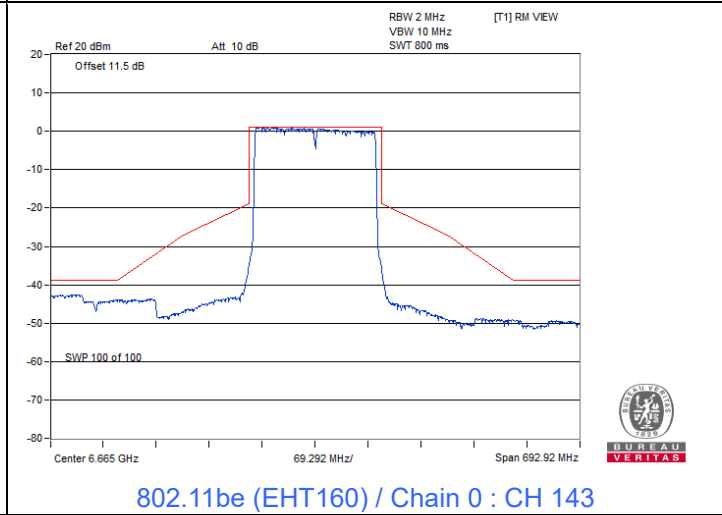
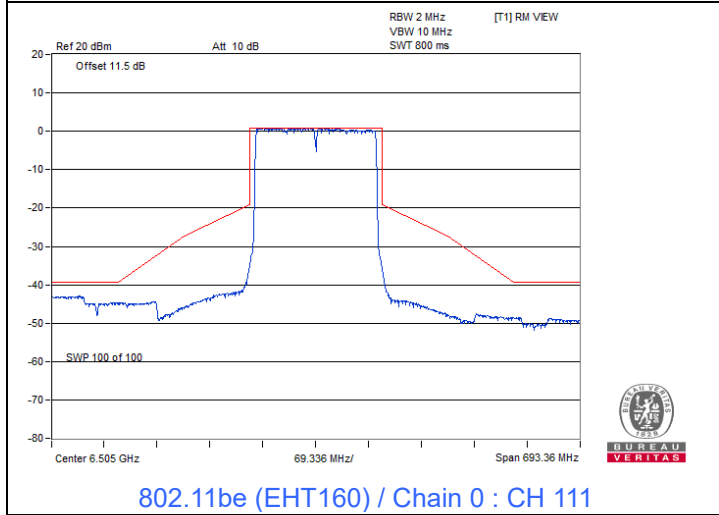
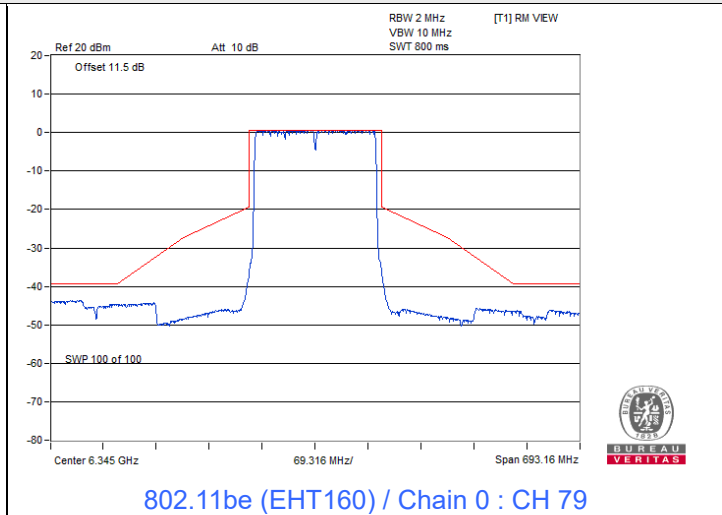
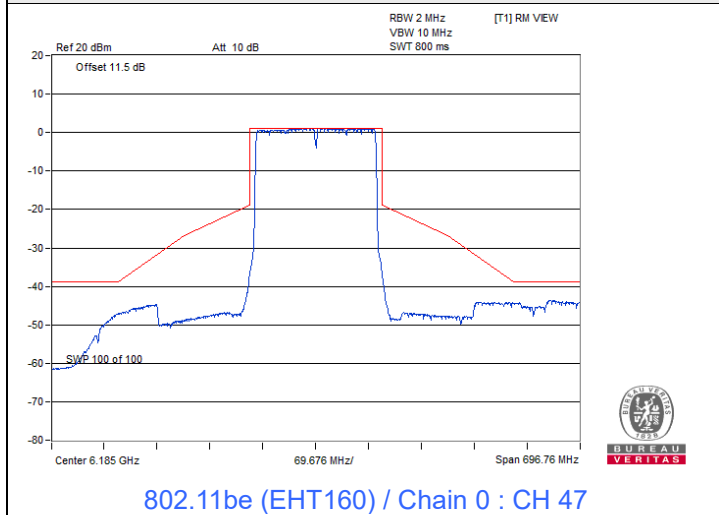


### Spectrum Plot

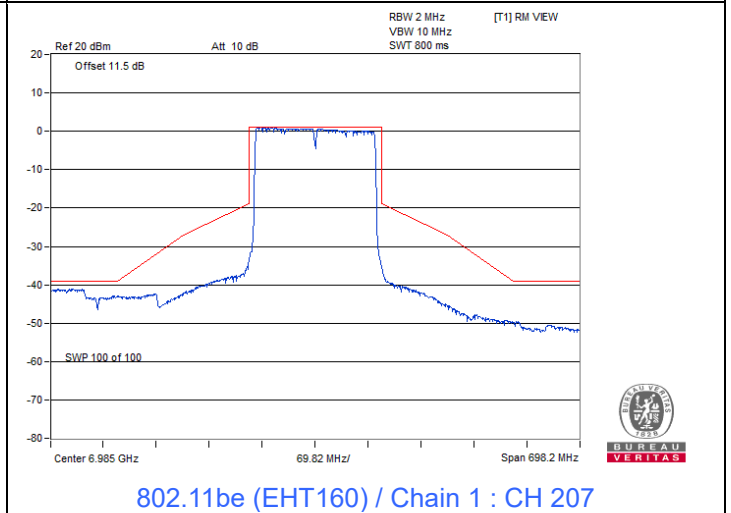
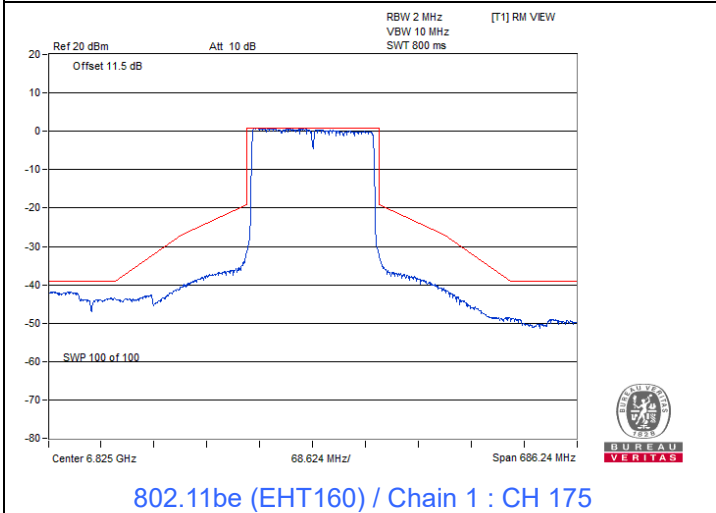
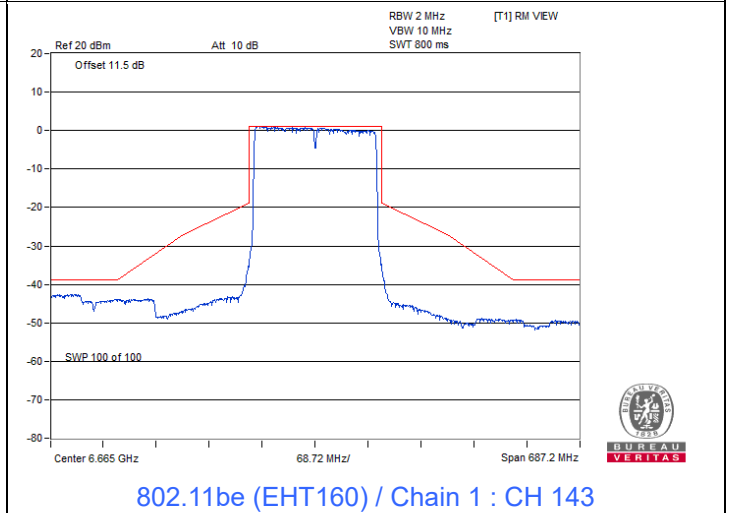
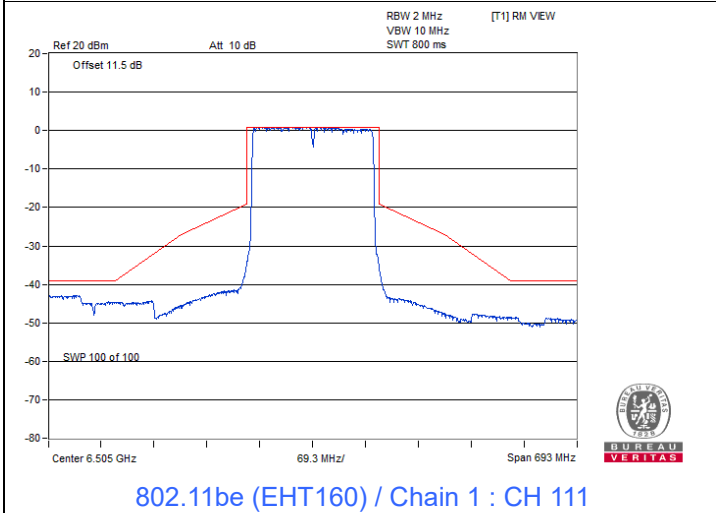
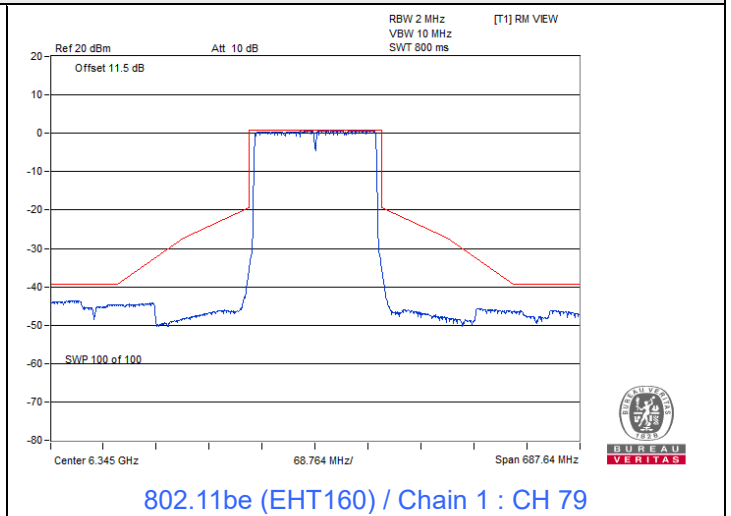
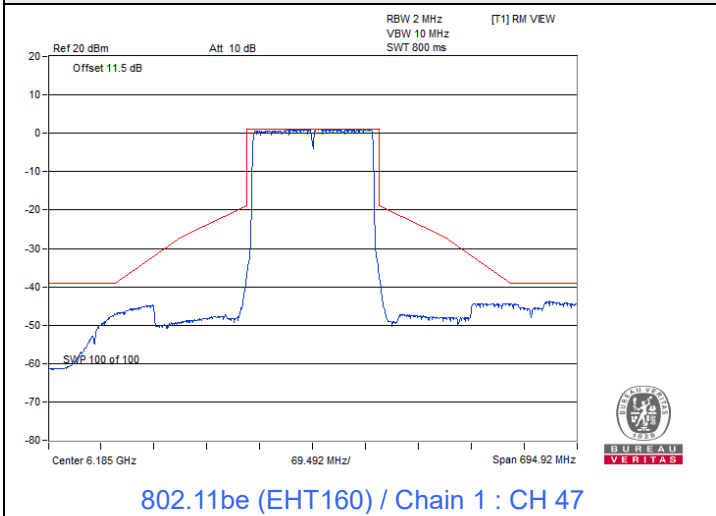


802.11be (EHT160)

Spectrum Plot



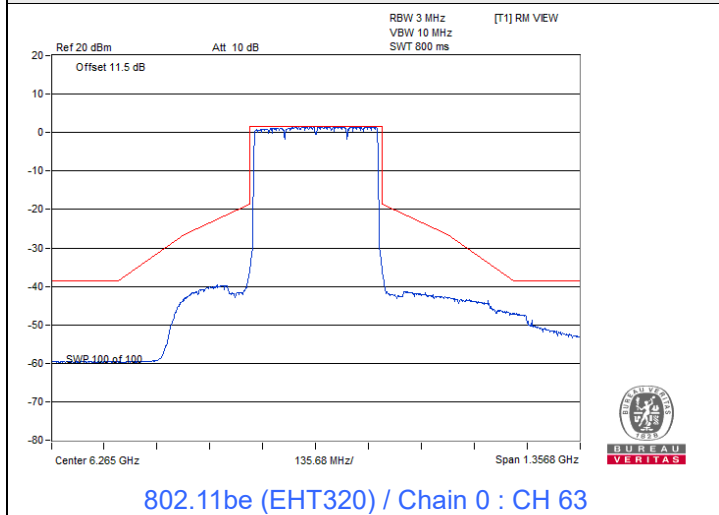
### Spectrum Plot



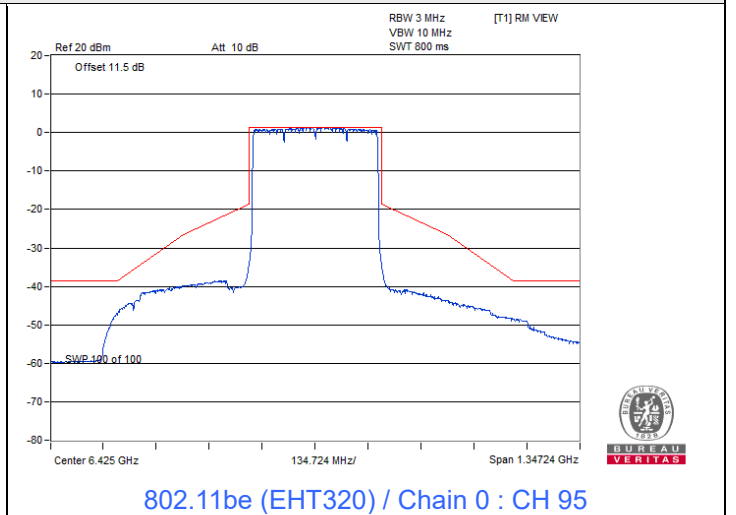


### 802.11be (EHT320)

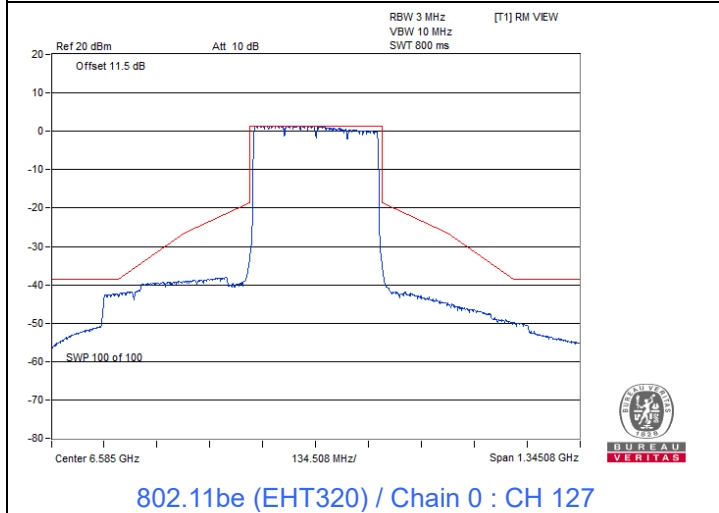
### Spectrum Plot



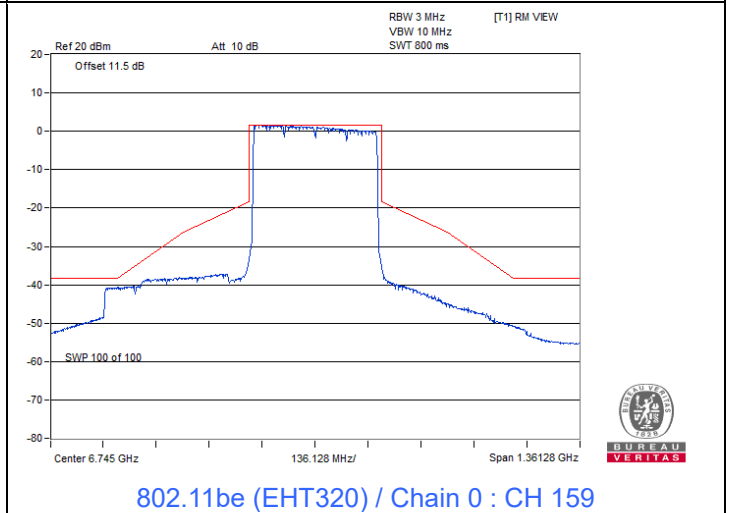
802.11be (EHT320) / Chain 0 : CH 63



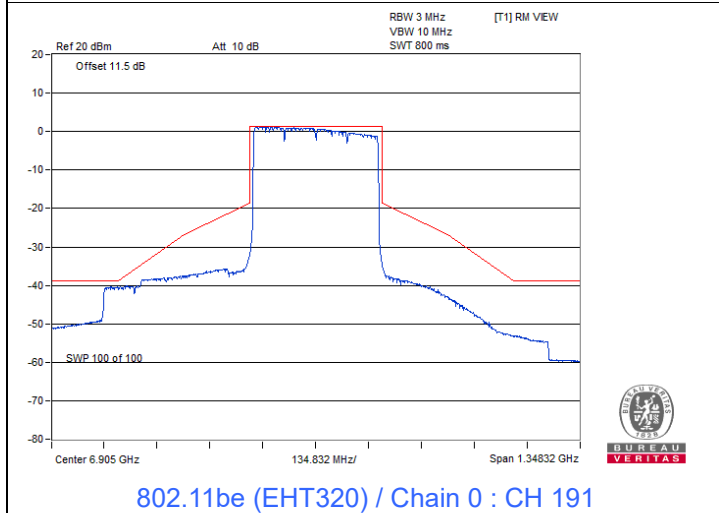
802.11be (EHT320) / Chain 0 : CH 95



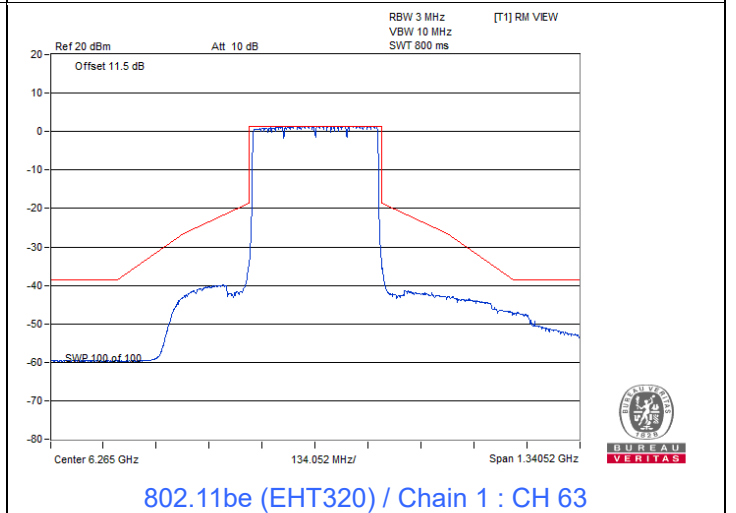
802.11be (EHT320) / Chain 0 : CH 127



802.11be (EHT320) / Chain 0 : CH 159

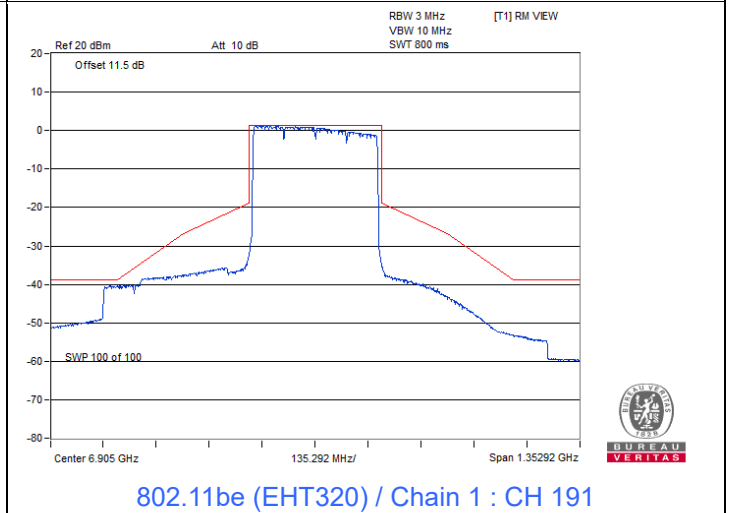
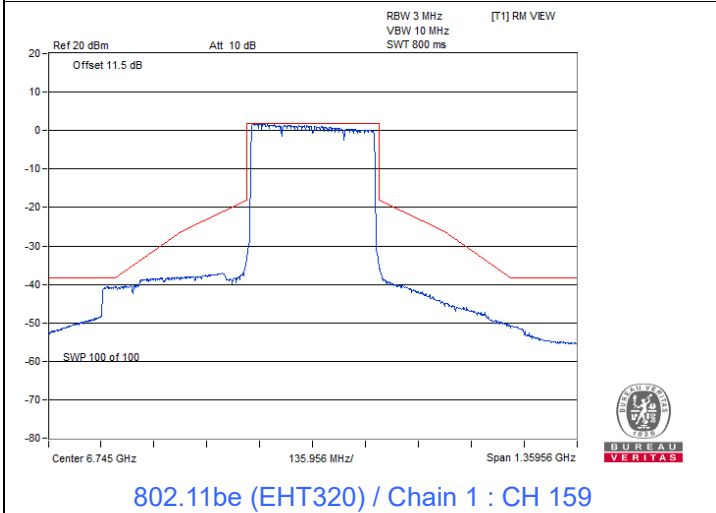
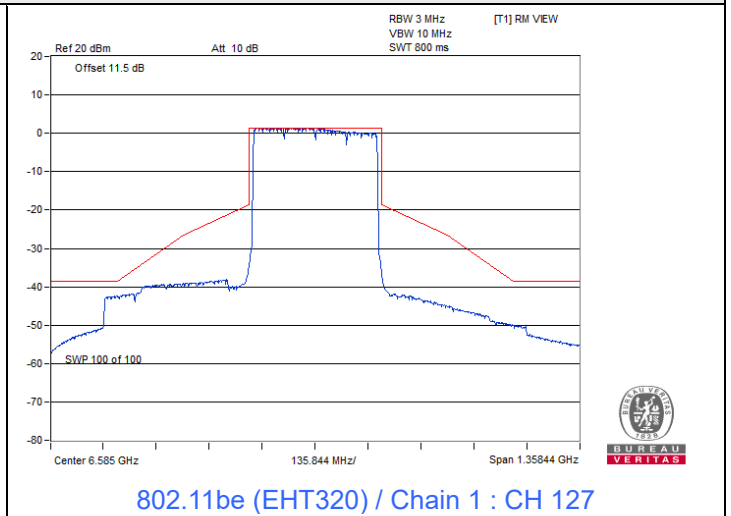
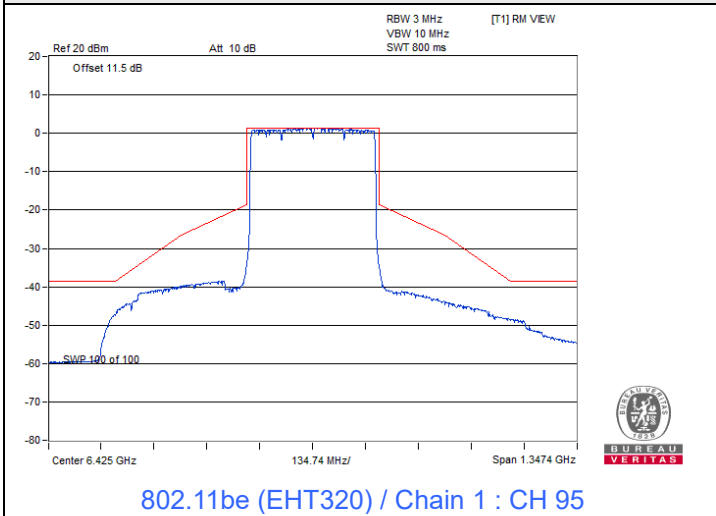


802.11be (EHT320) / Chain 0 : CH 191



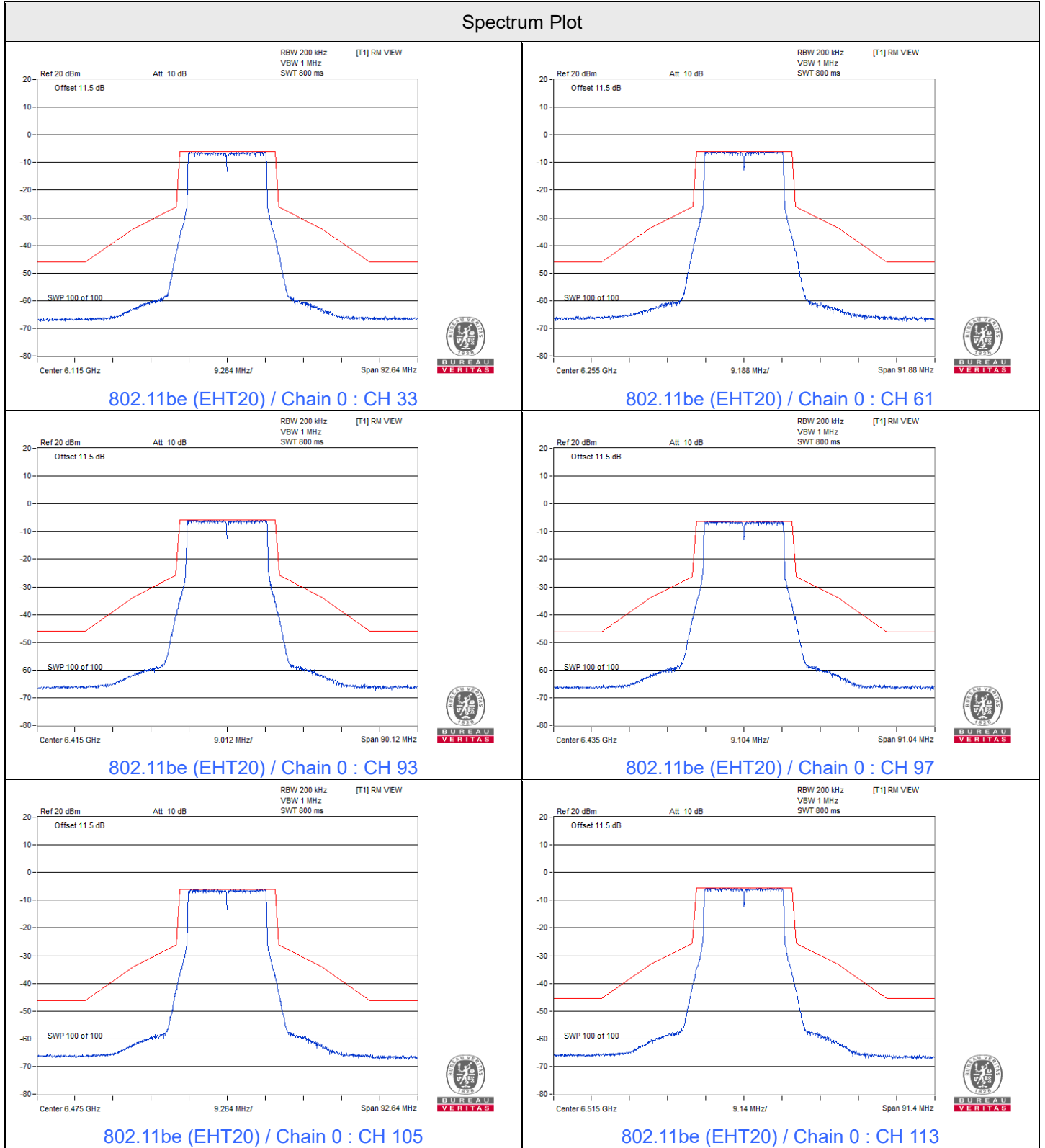
802.11be (EHT320) / Chain 1 : CH 63

### Spectrum Plot



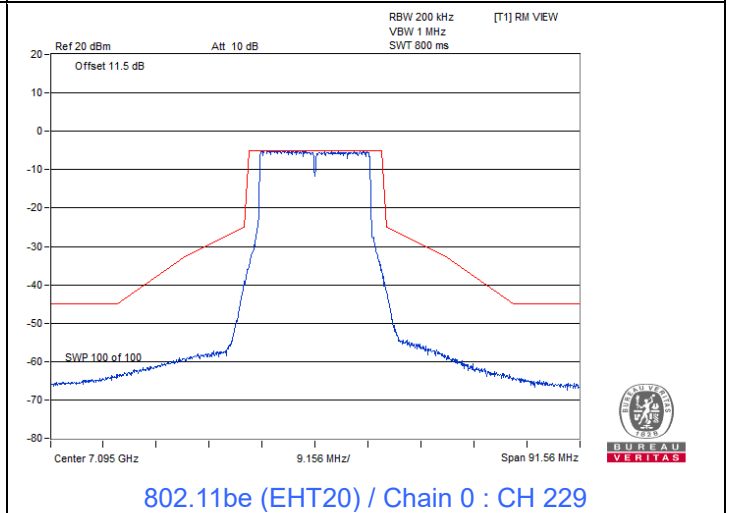
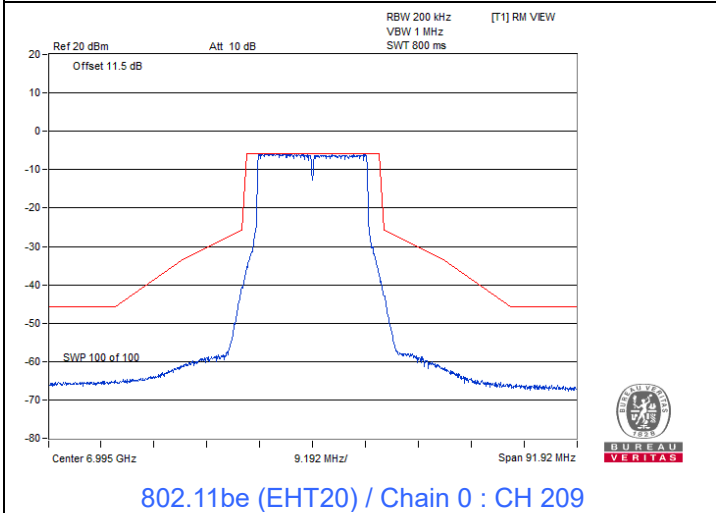
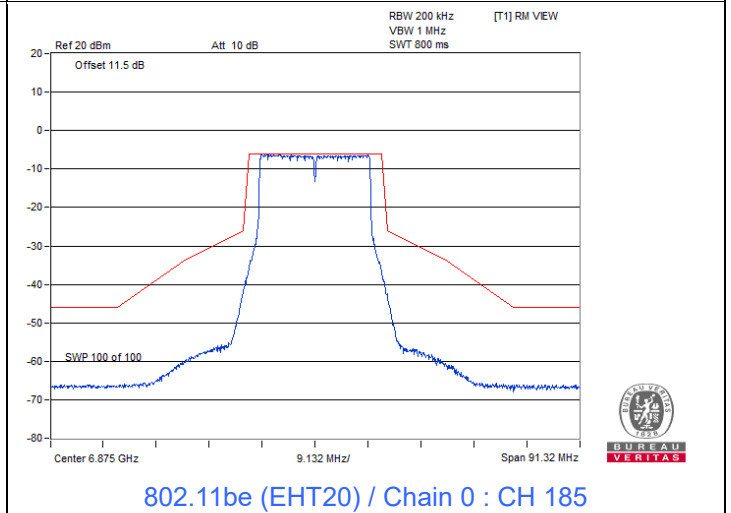
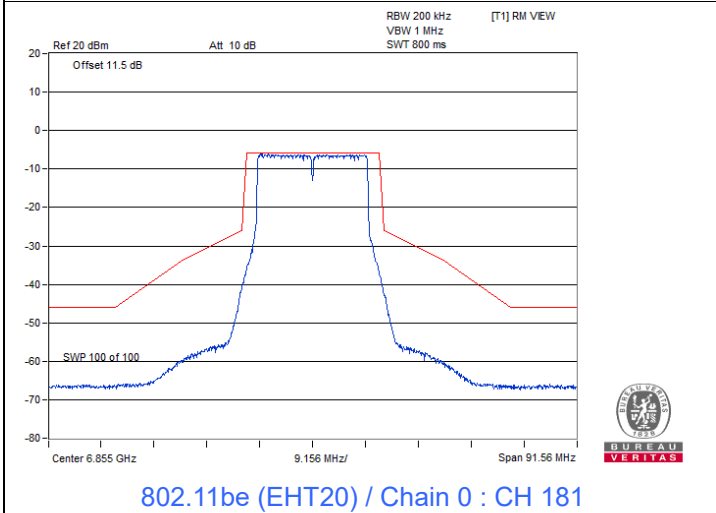
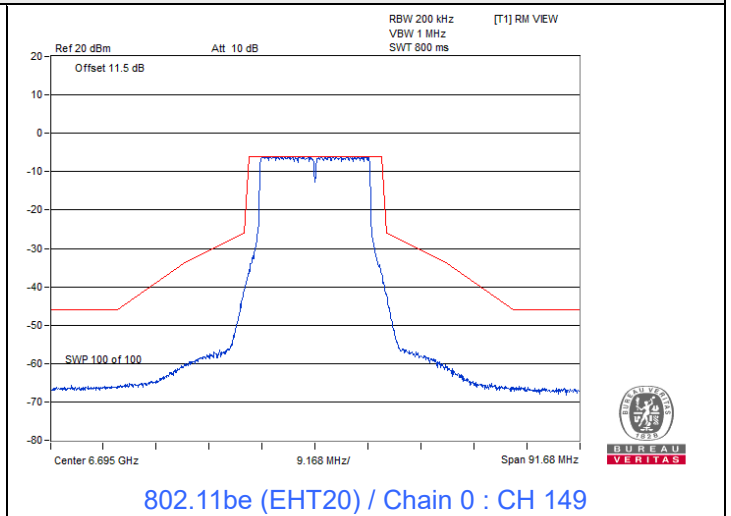
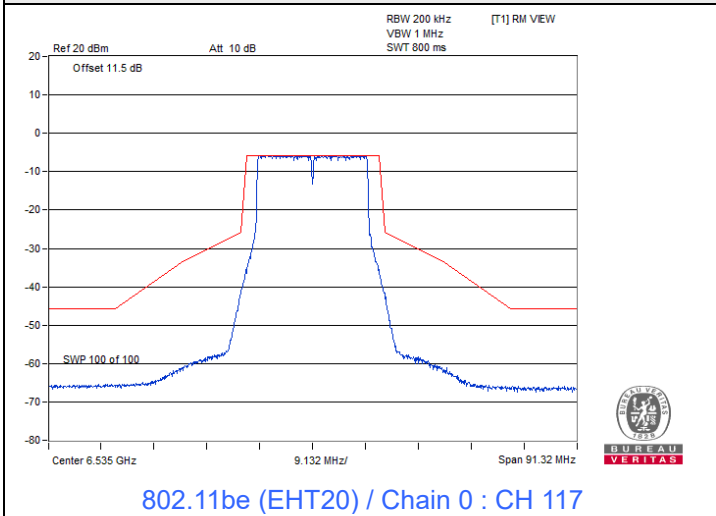
NSS2

802.11be (EHT20)

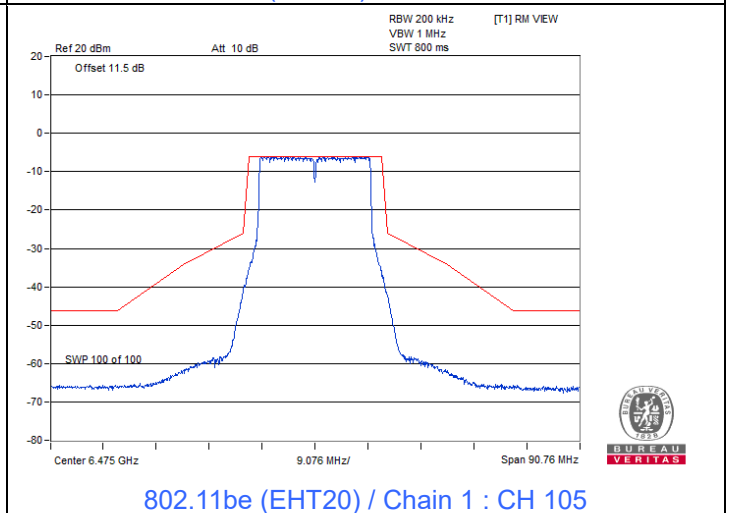
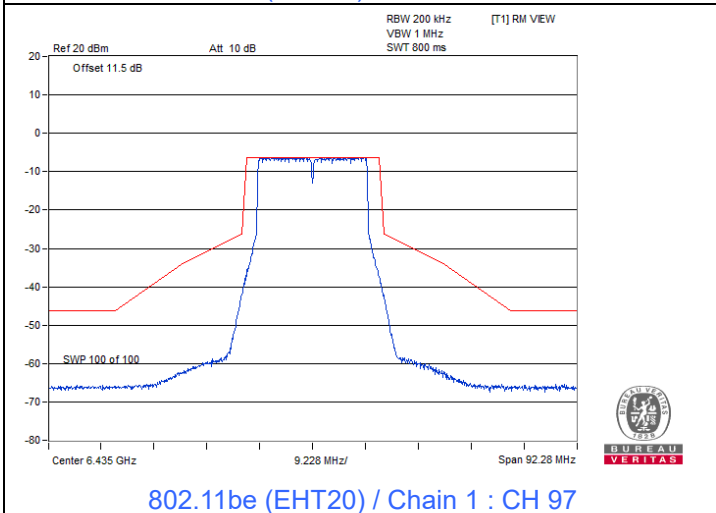
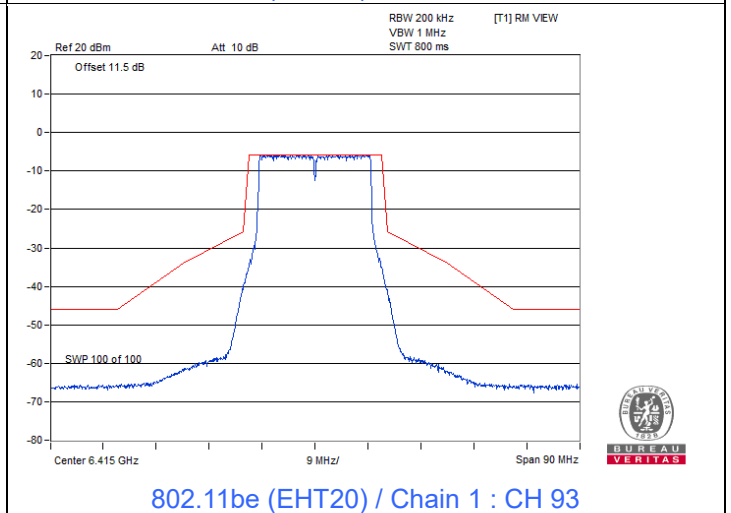
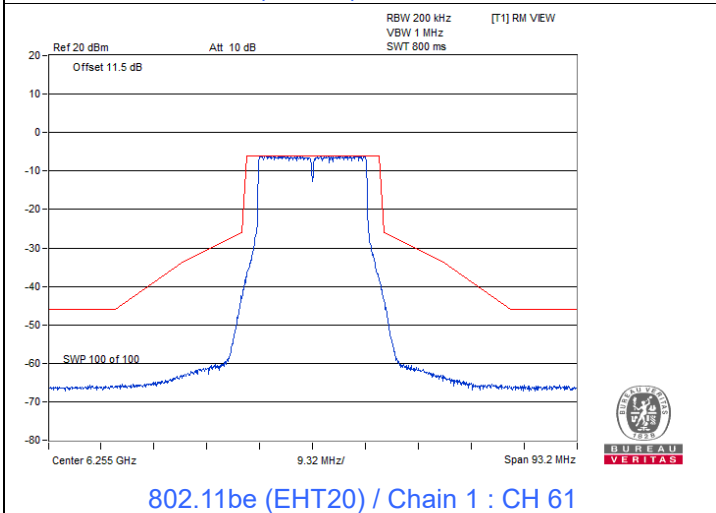
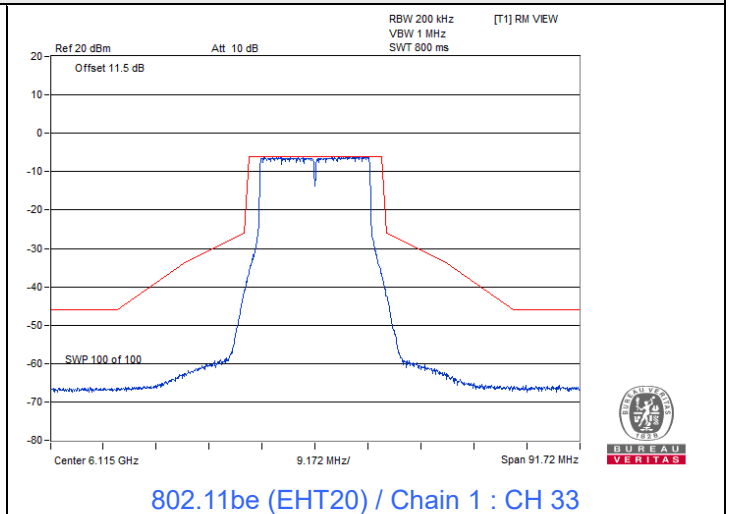
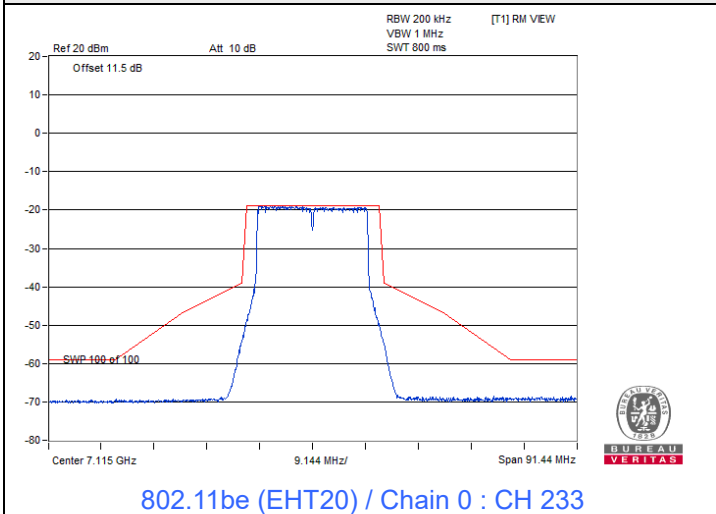




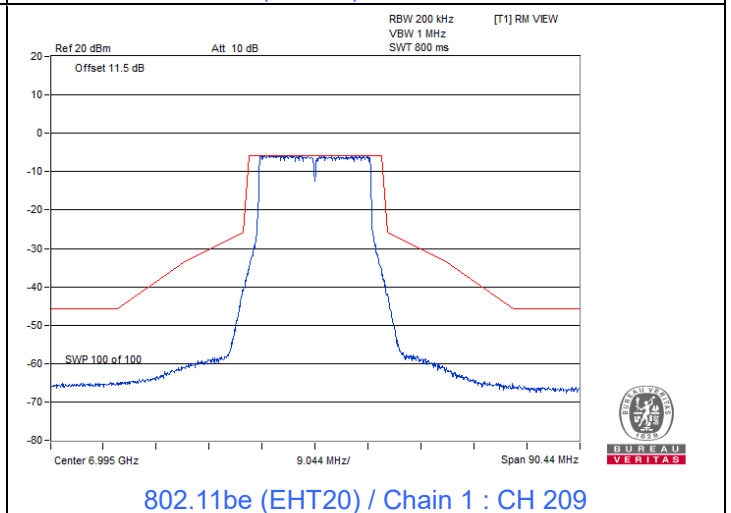
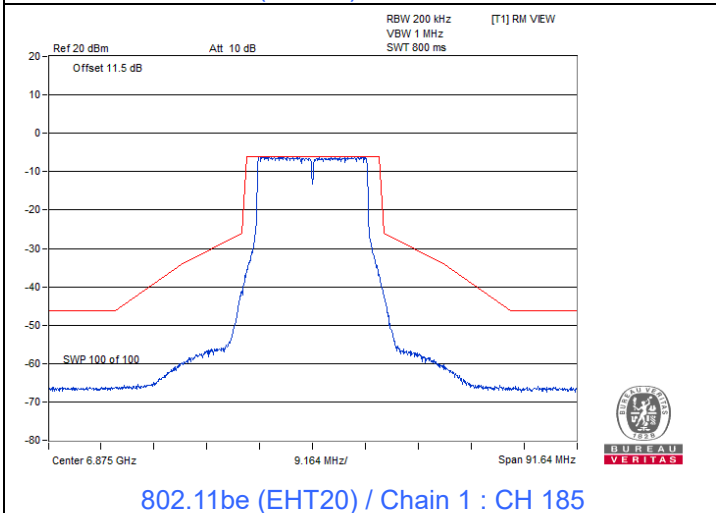
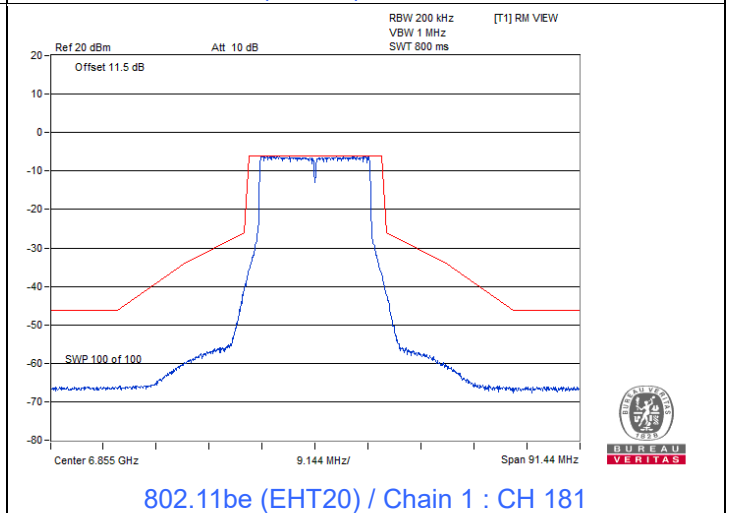
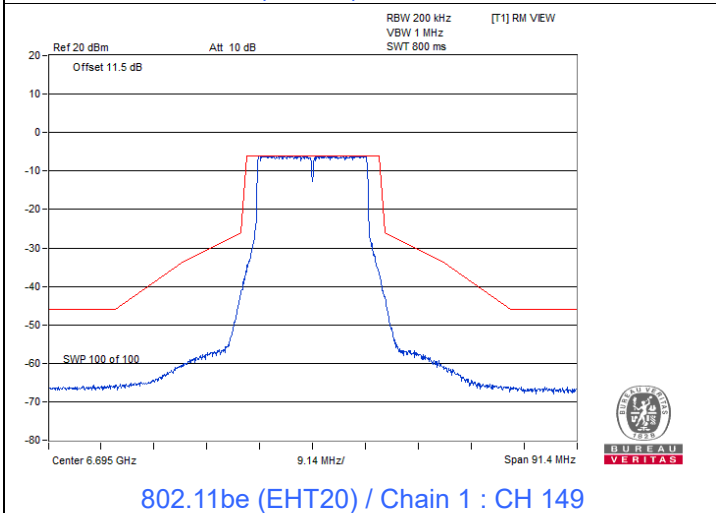
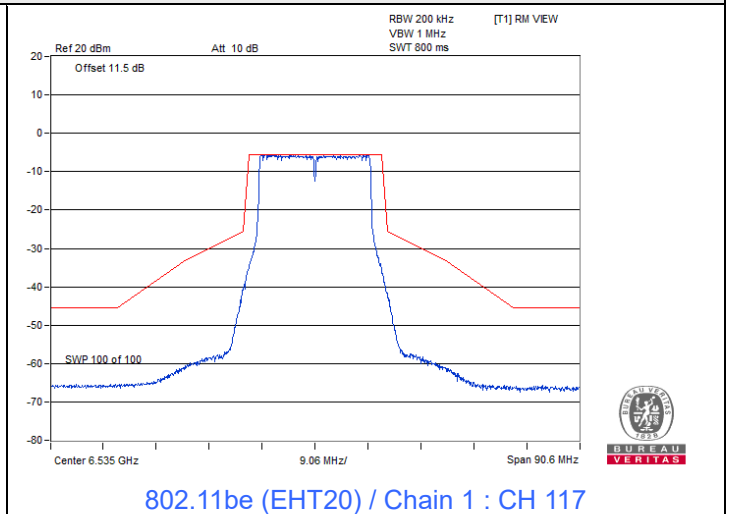
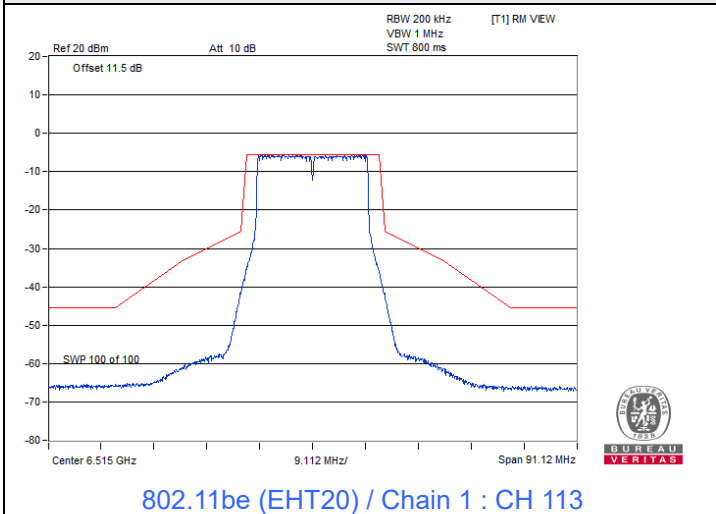
### Spectrum Plot



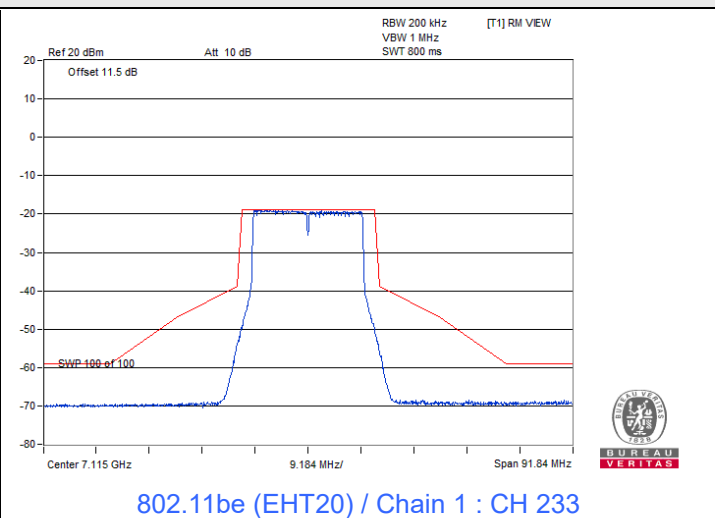
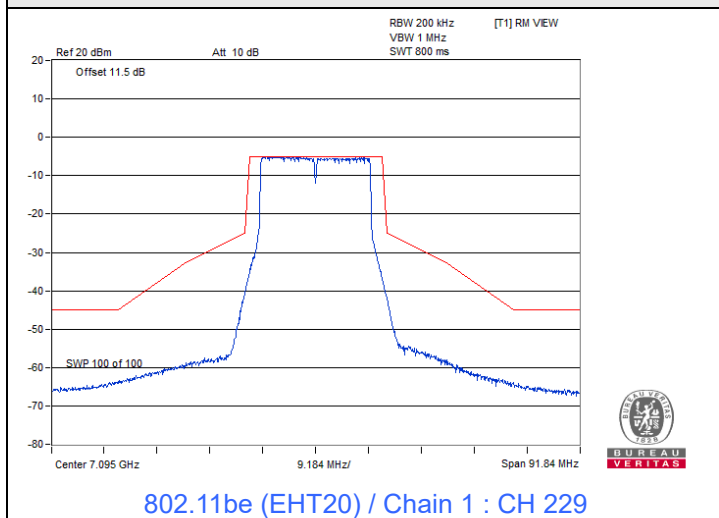
### Spectrum Plot



### Spectrum Plot

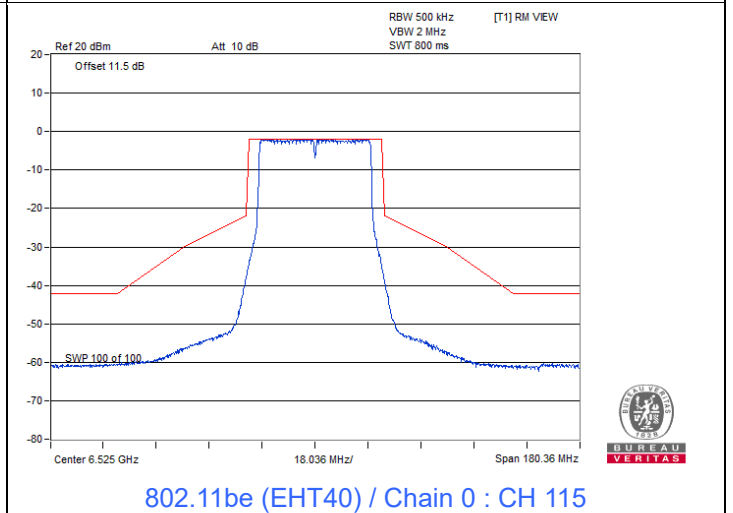
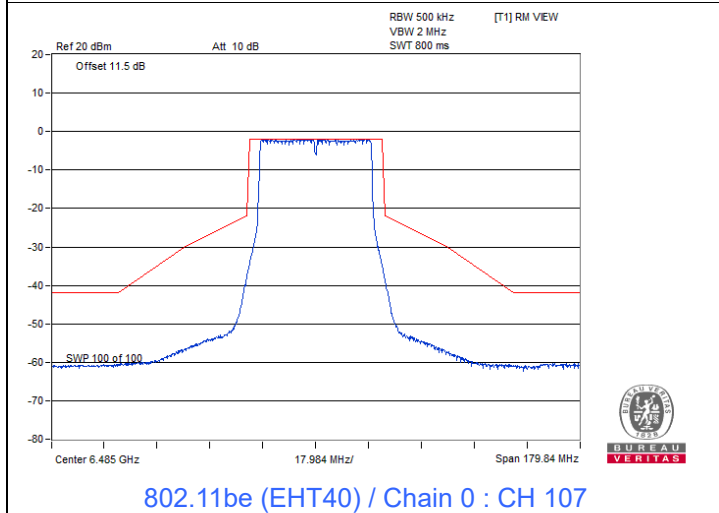
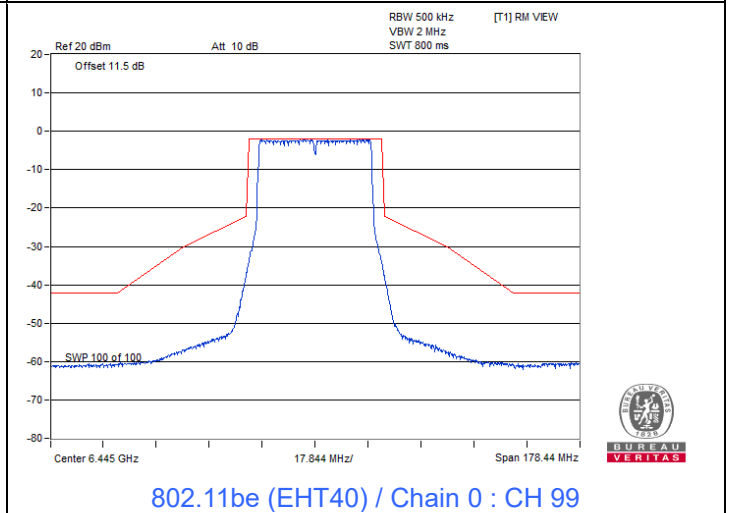
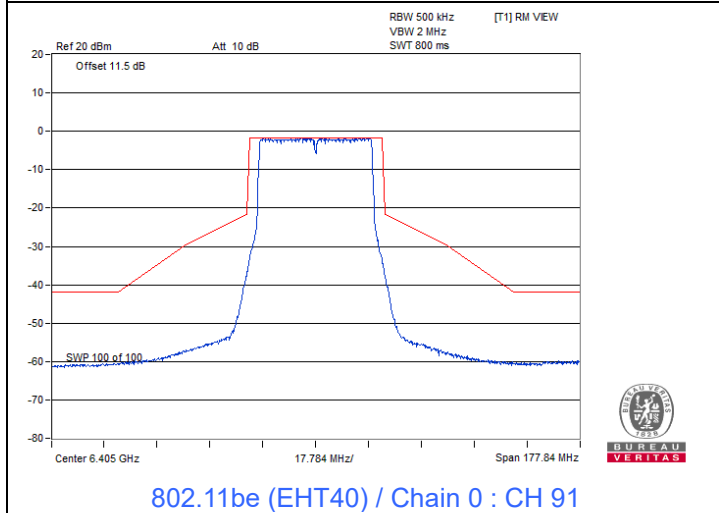
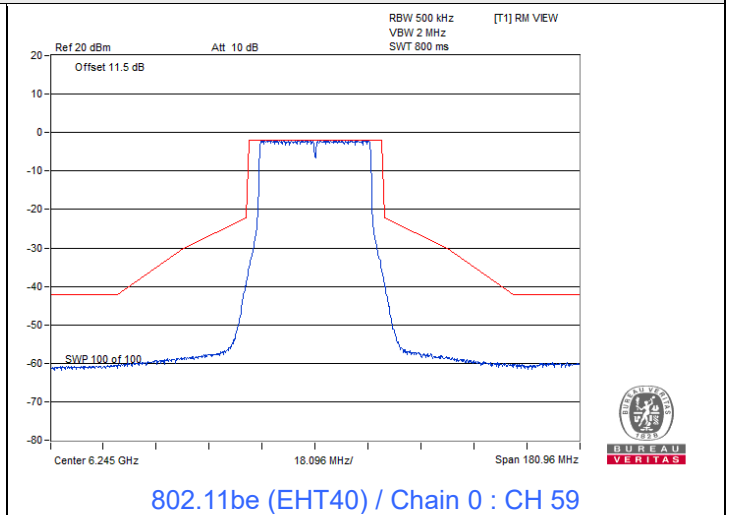
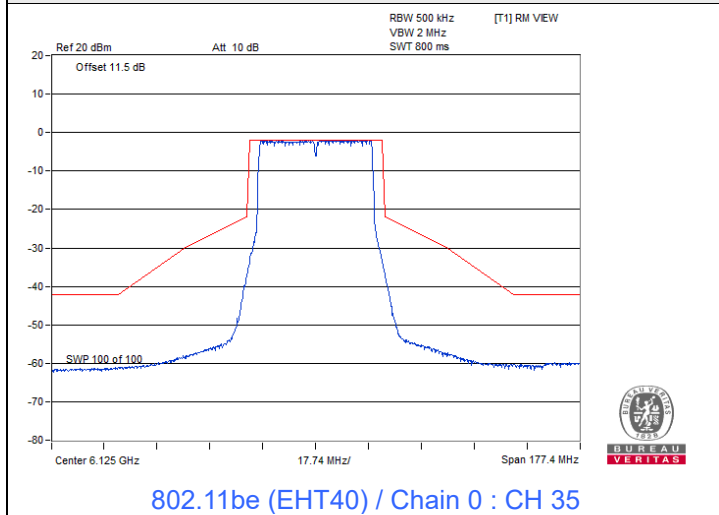


### Spectrum Plot

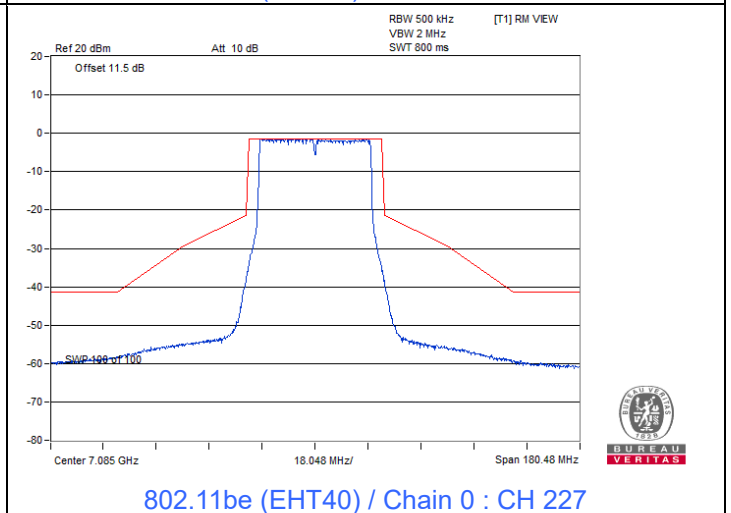
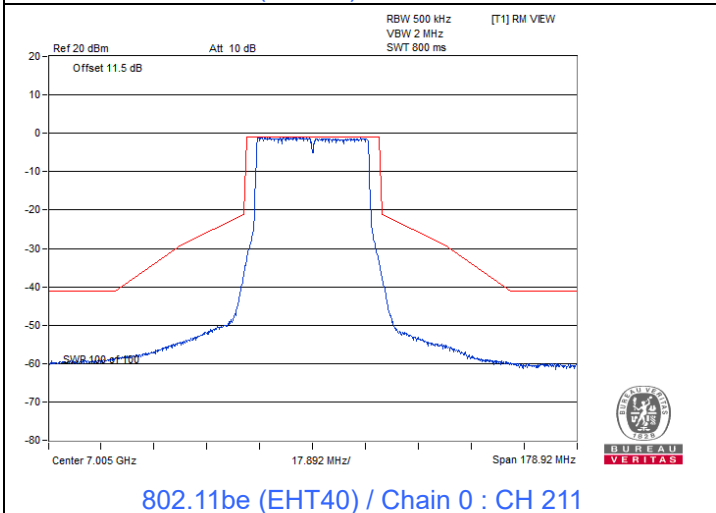
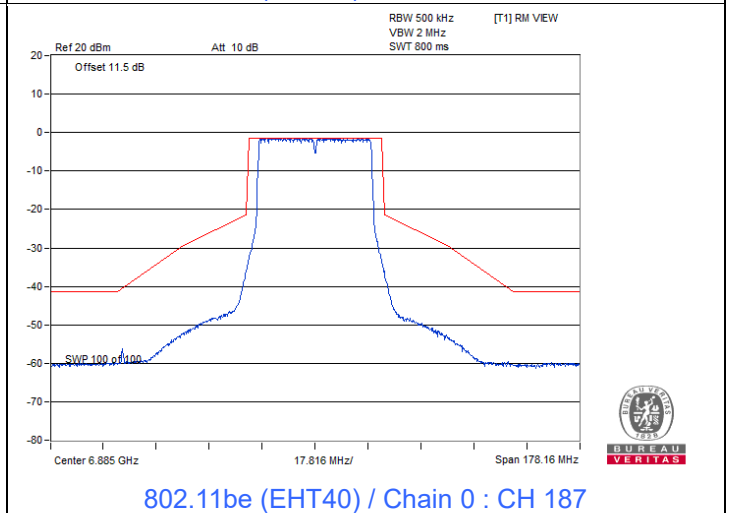
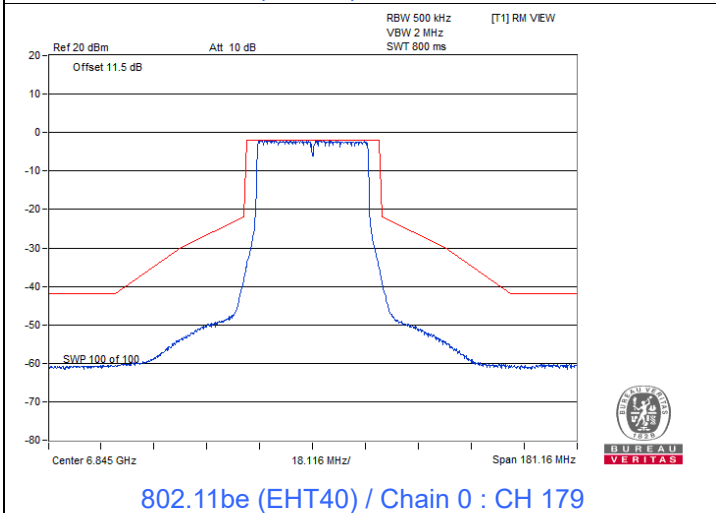
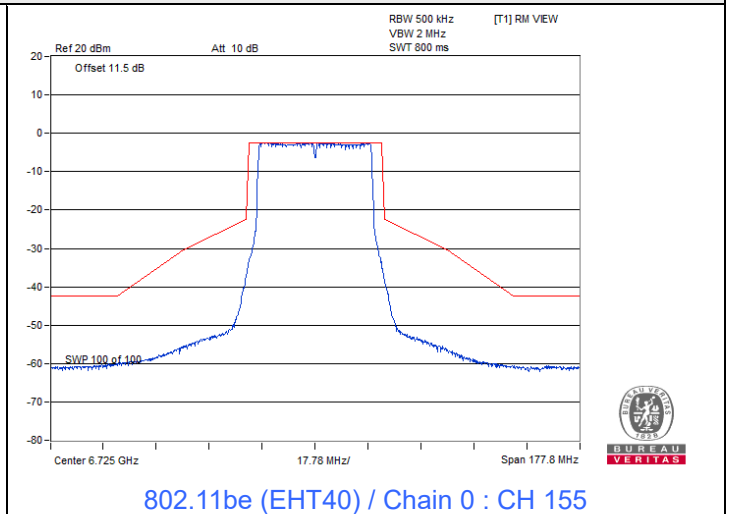
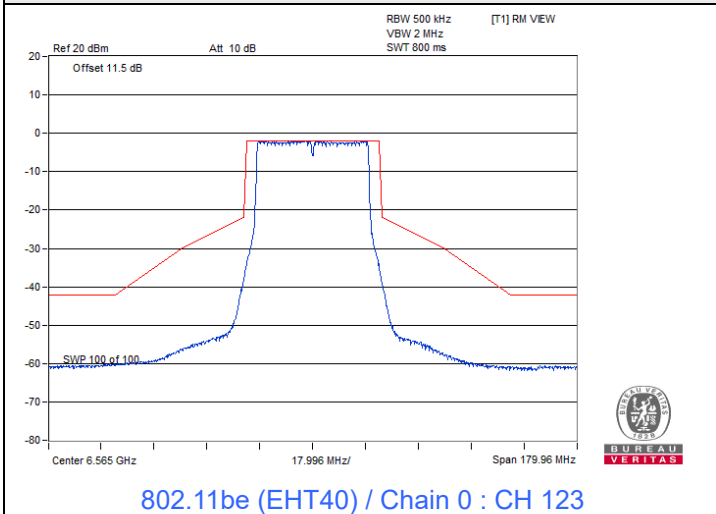


### 802.11be (EHT40)

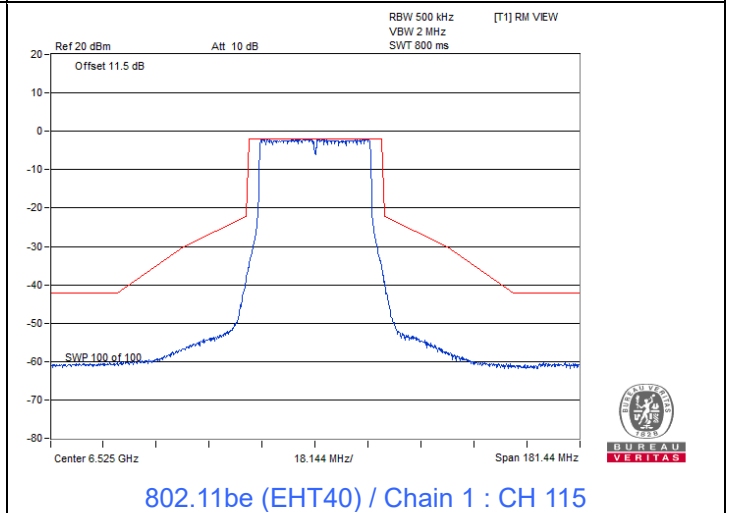
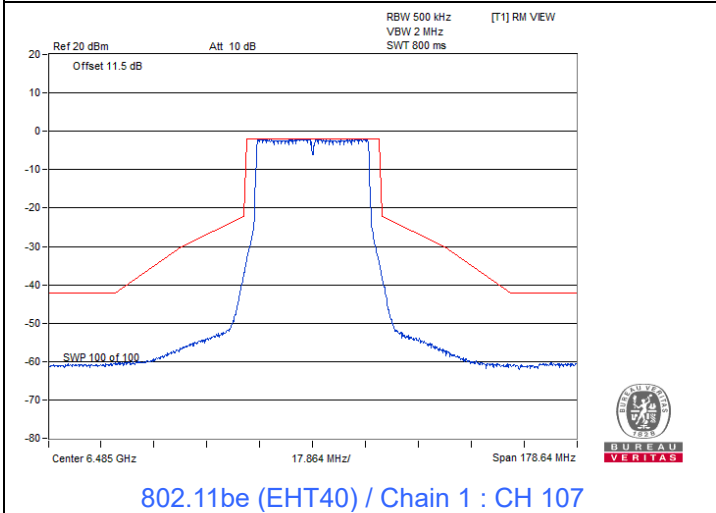
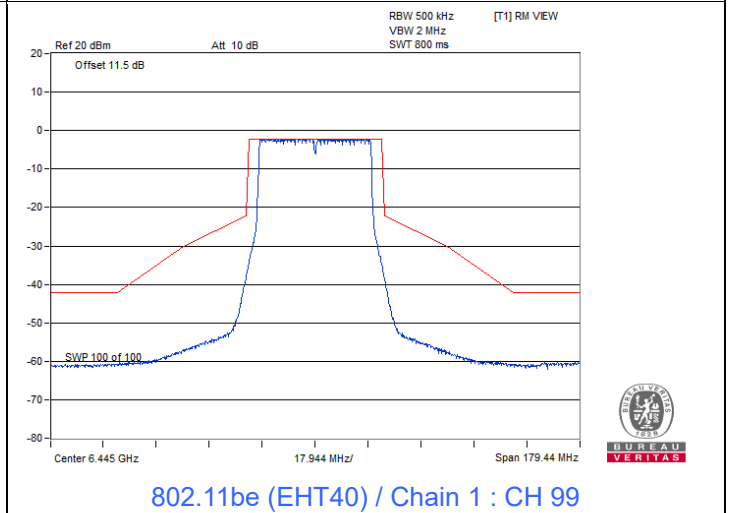
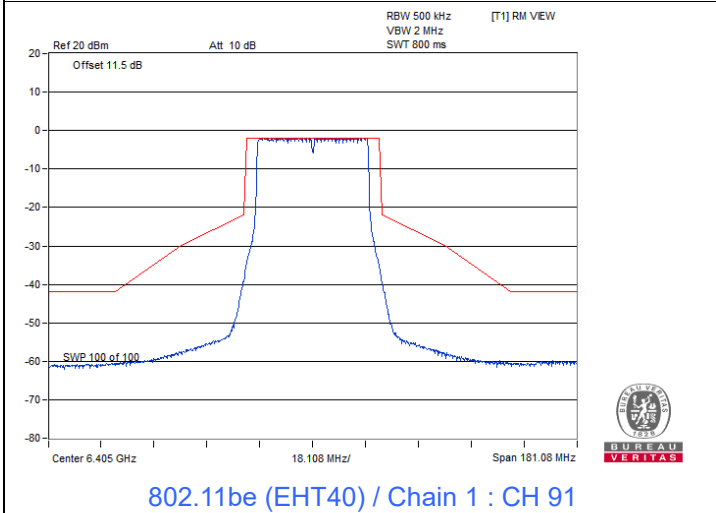
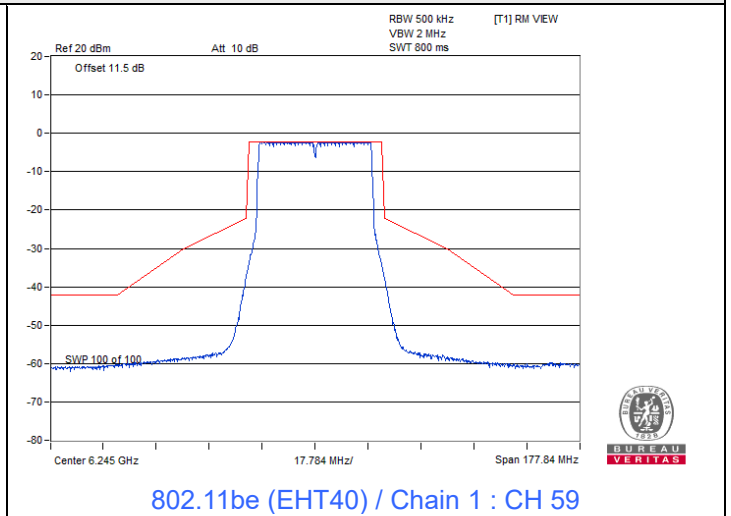
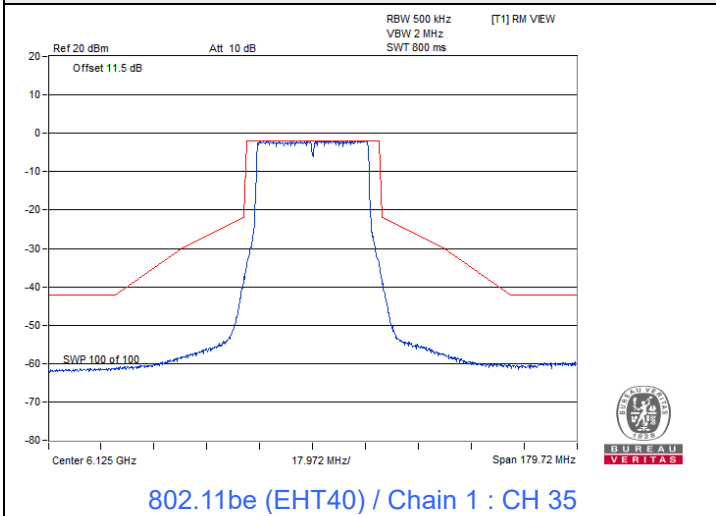
#### Spectrum Plot



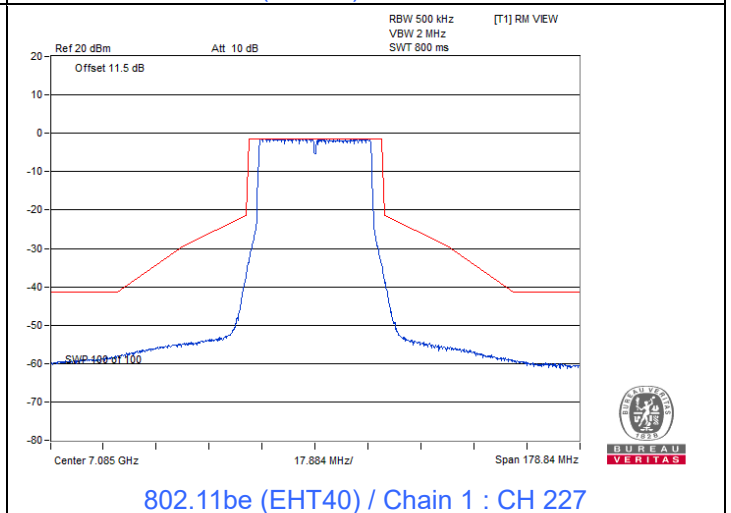
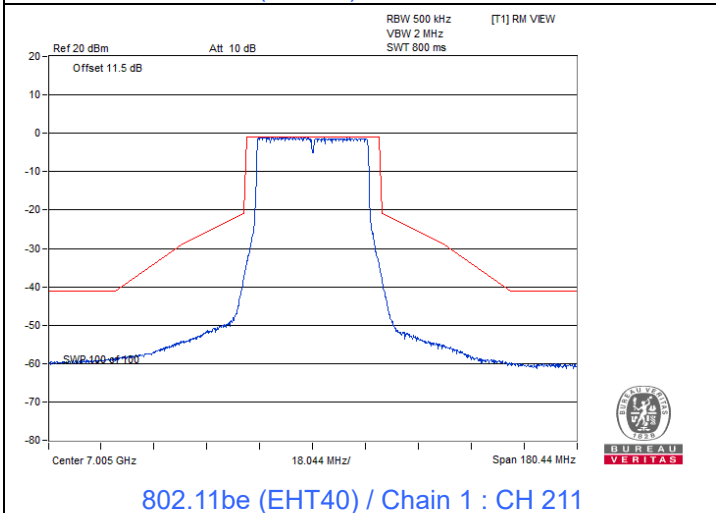
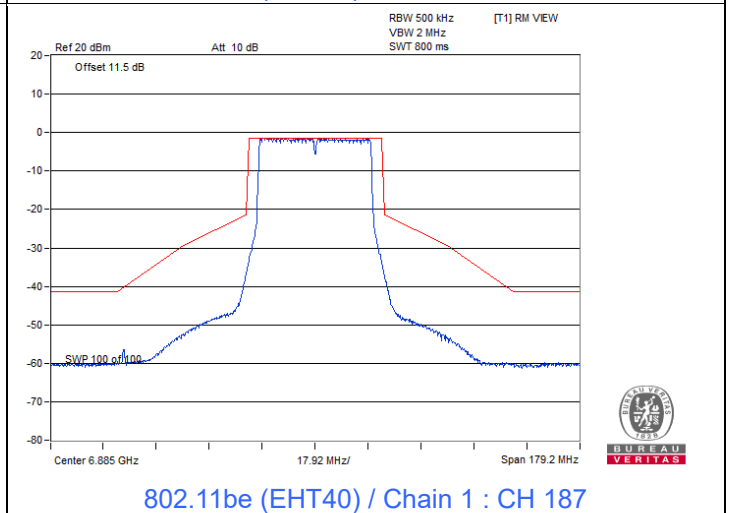
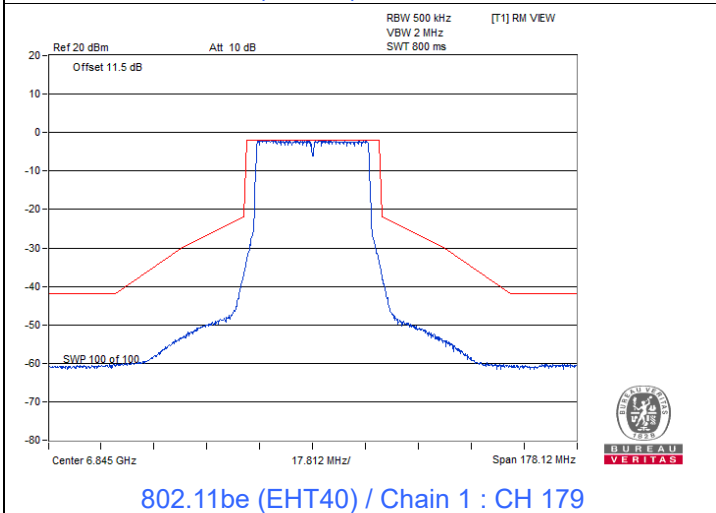
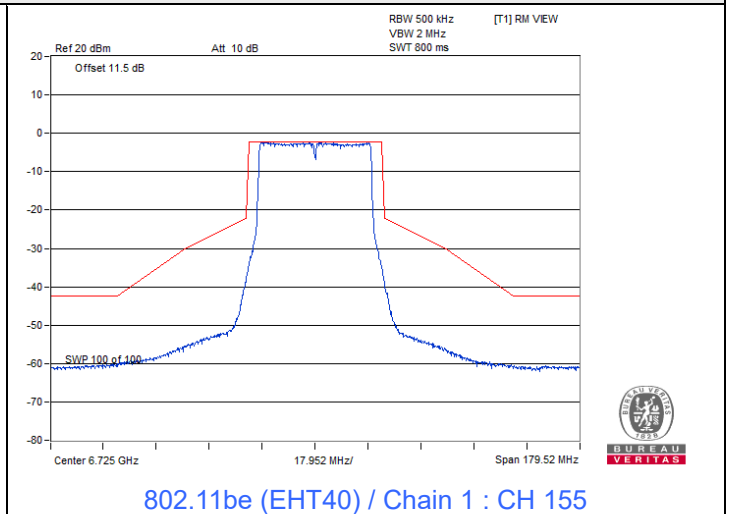
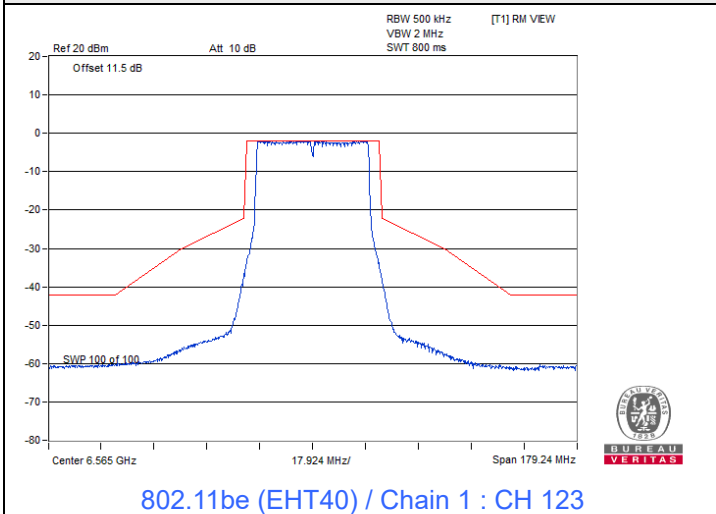
### Spectrum Plot



### Spectrum Plot



### Spectrum Plot

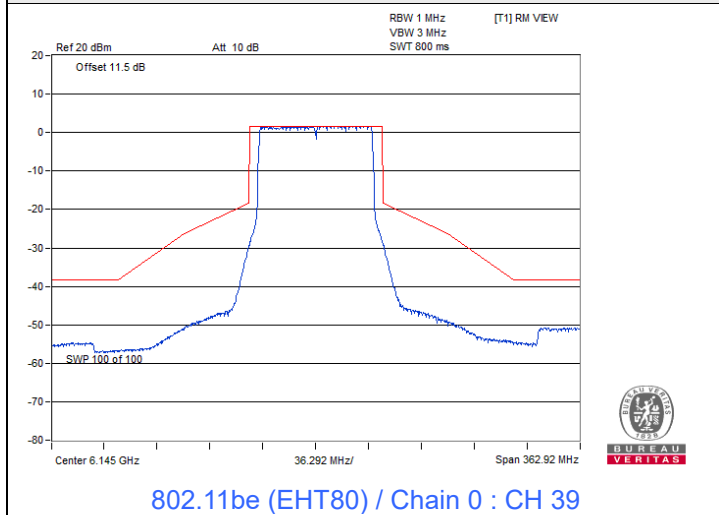




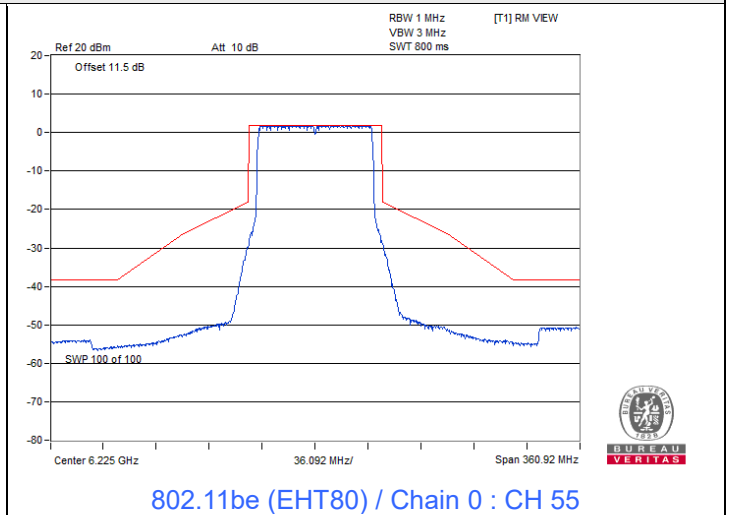


### 802.11be (EHT80)

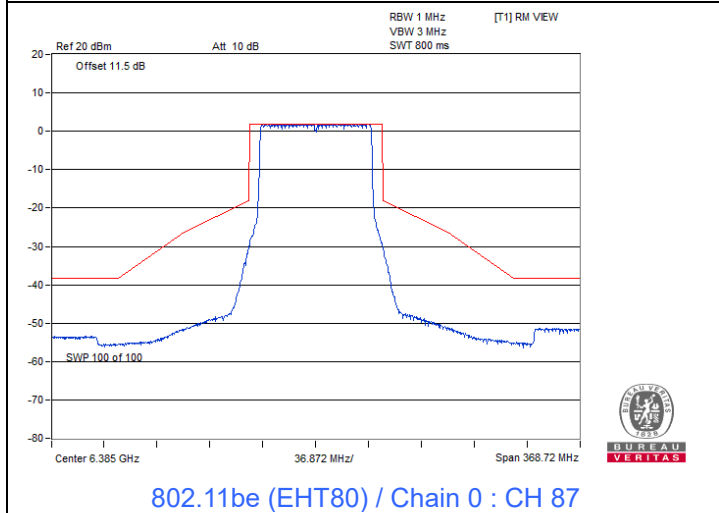
#### Spectrum Plot



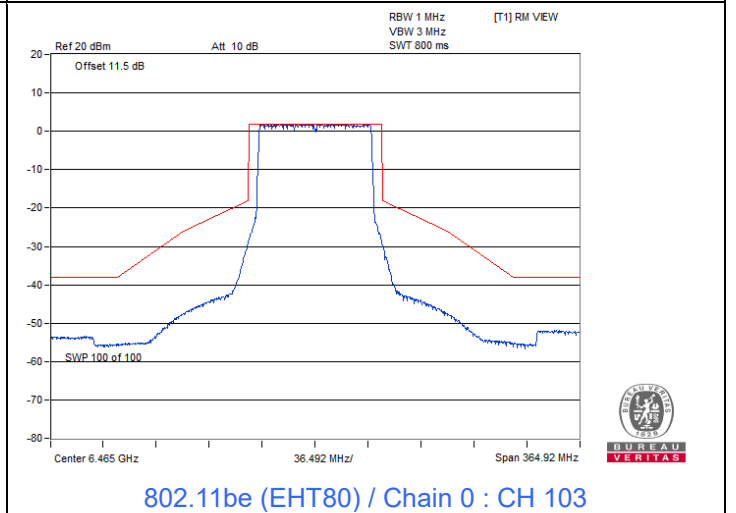
802.11be (EHT80) / Chain 0 : CH 39



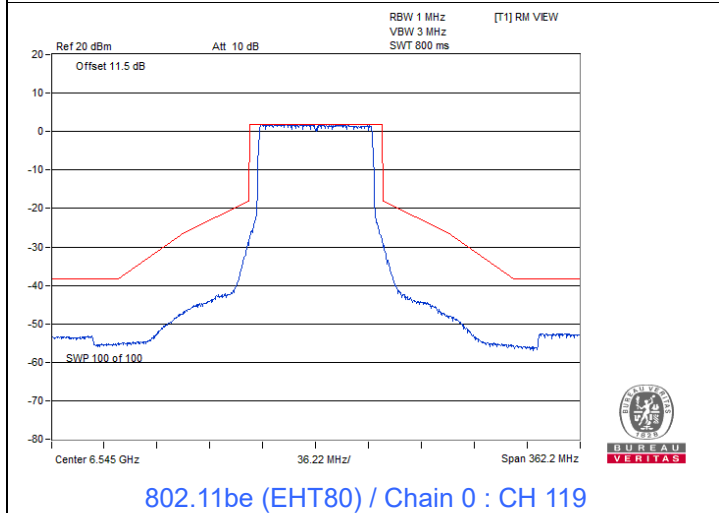
802.11be (EHT80) / Chain 0 : CH 55



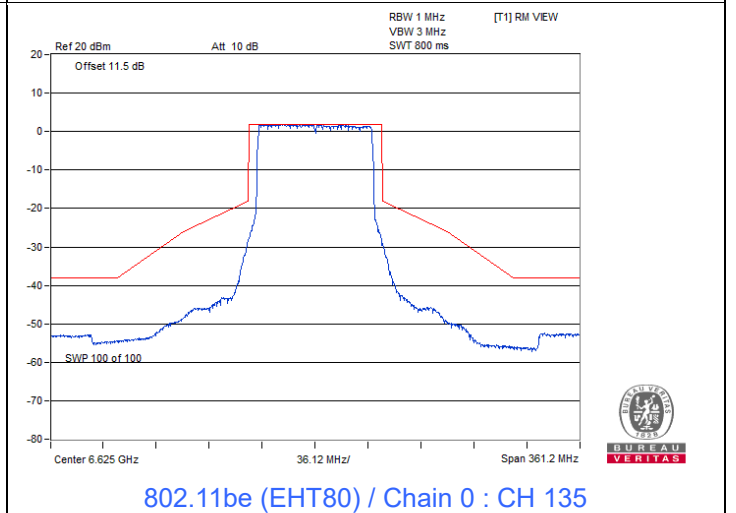
802.11be (EHT80) / Chain 0 : CH 87



802.11be (EHT80) / Chain 0 : CH 103

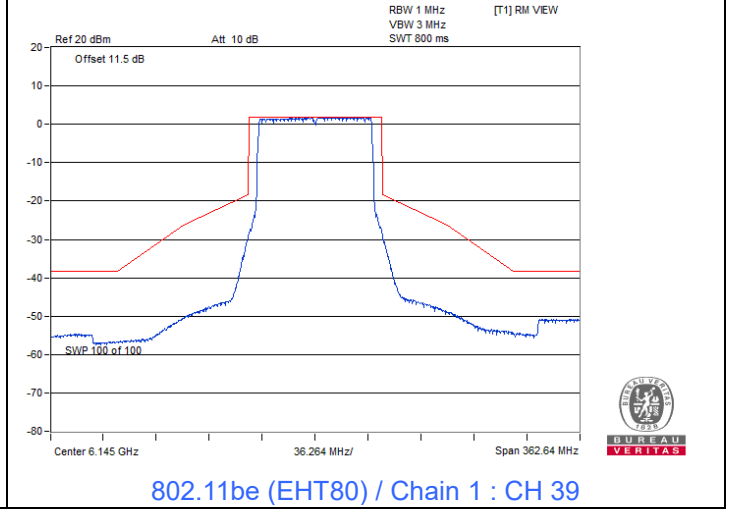
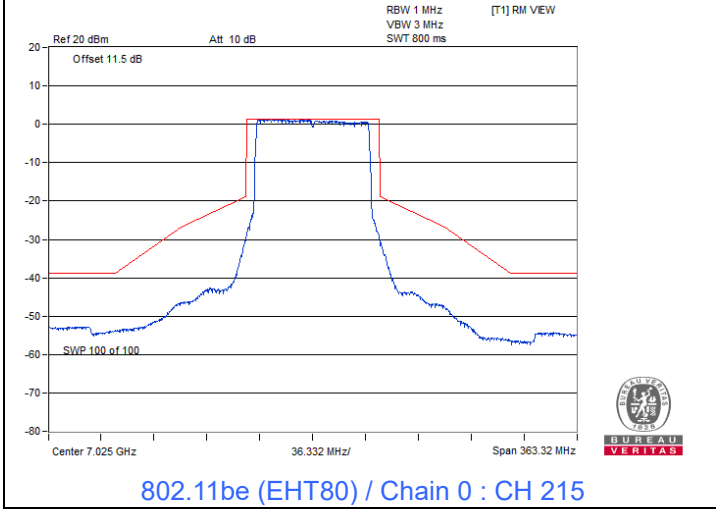
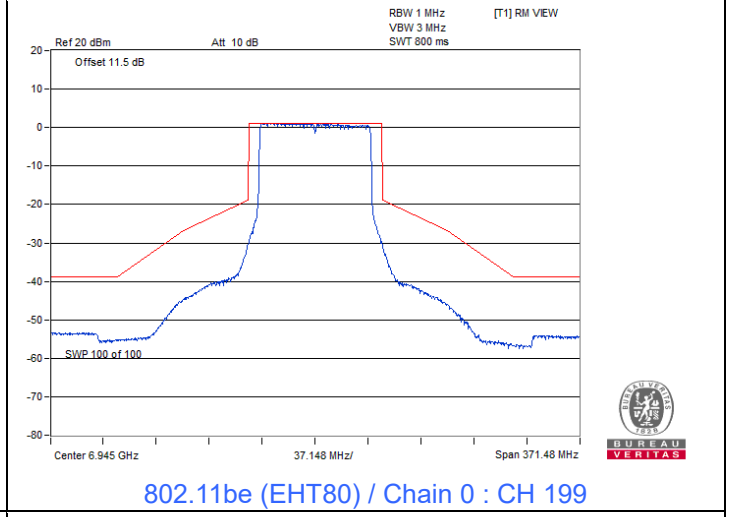
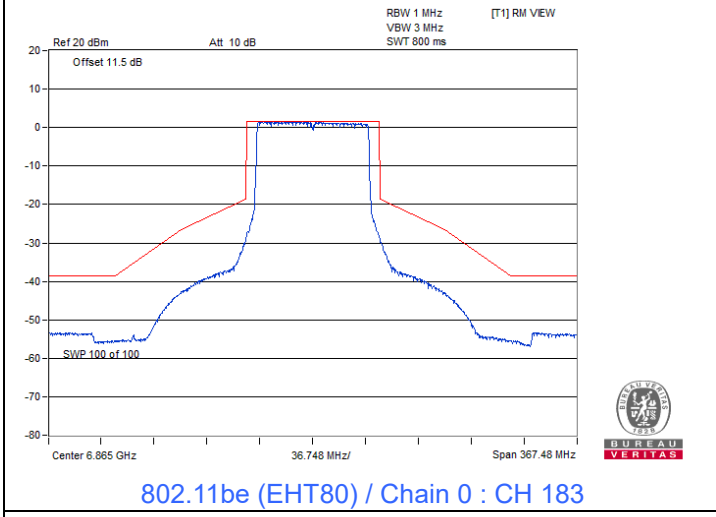
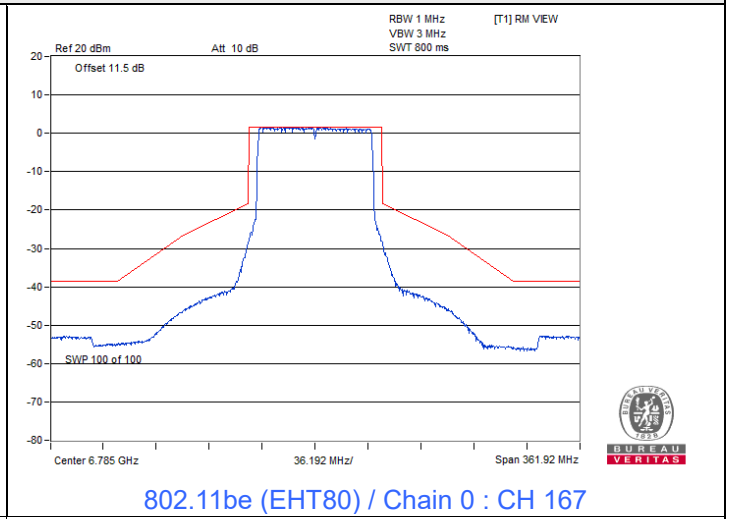
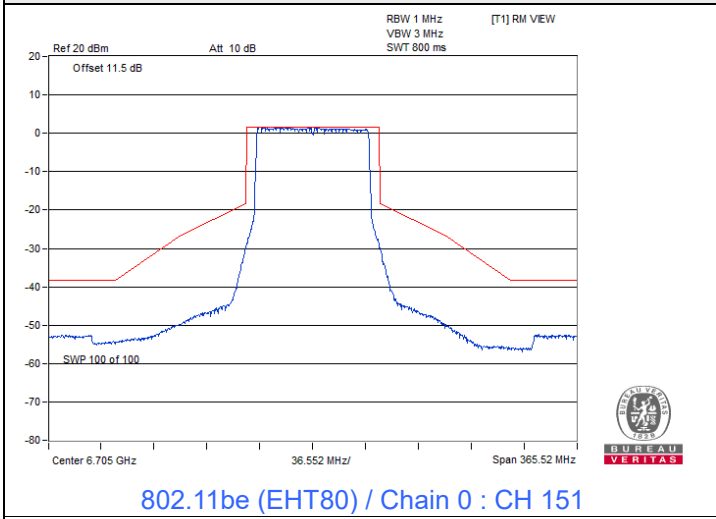


802.11be (EHT80) / Chain 0 : CH 119

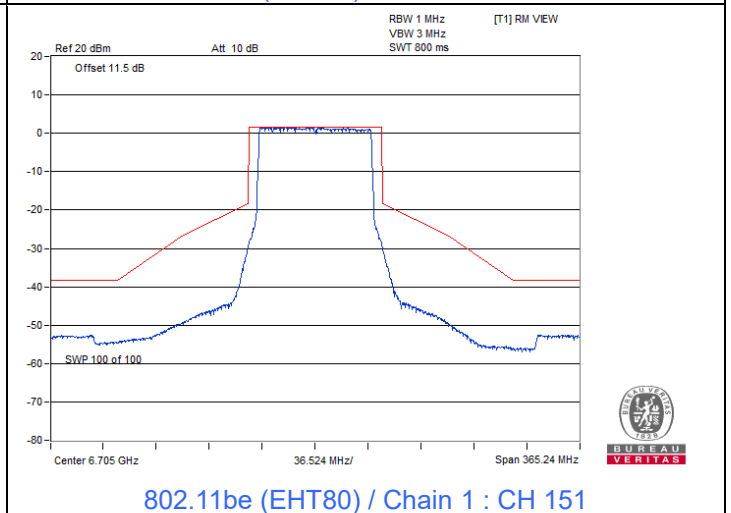
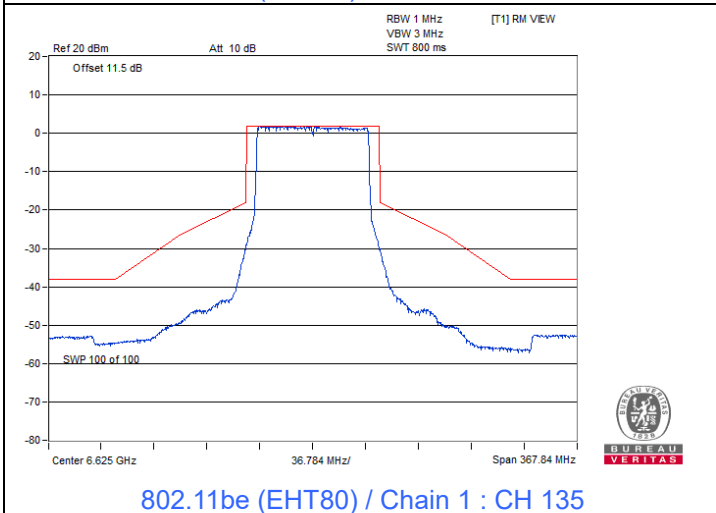
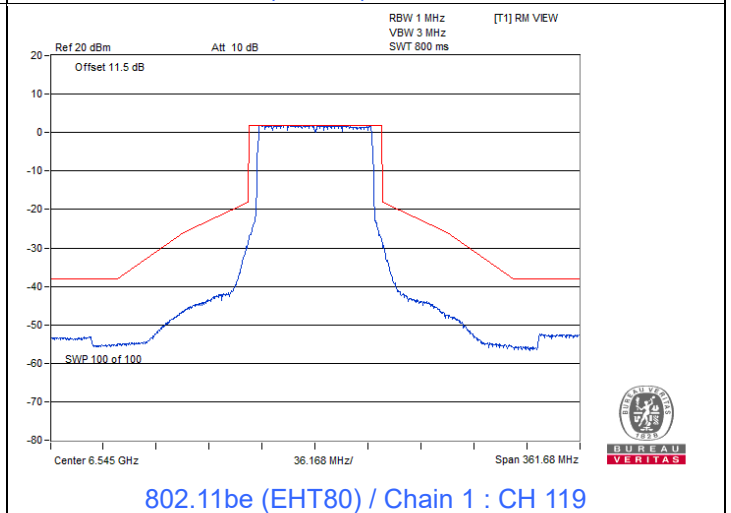
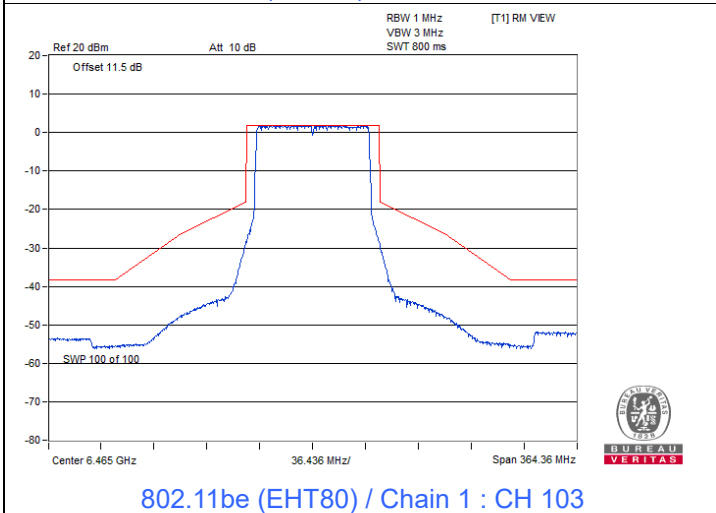
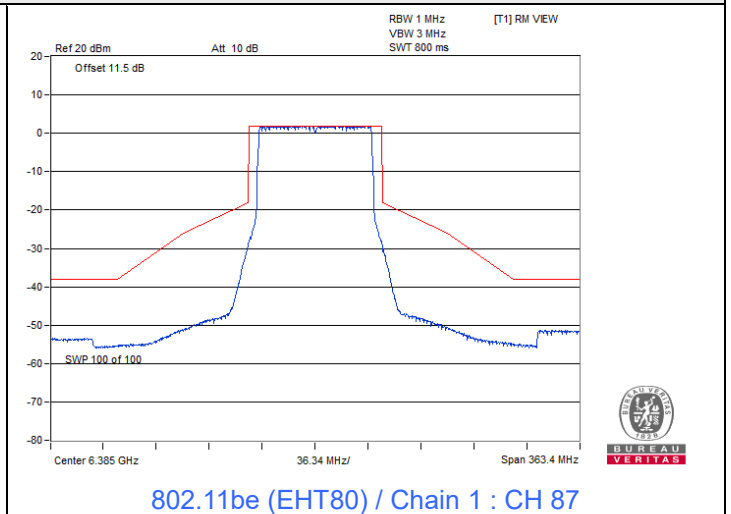
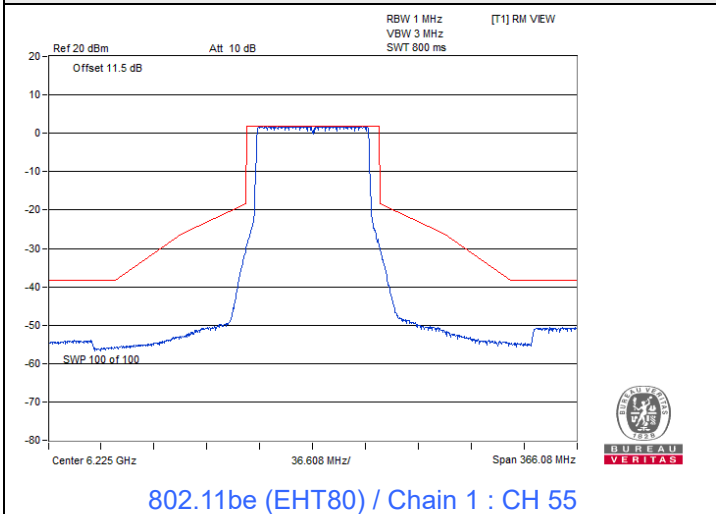


802.11be (EHT80) / Chain 0 : CH 135

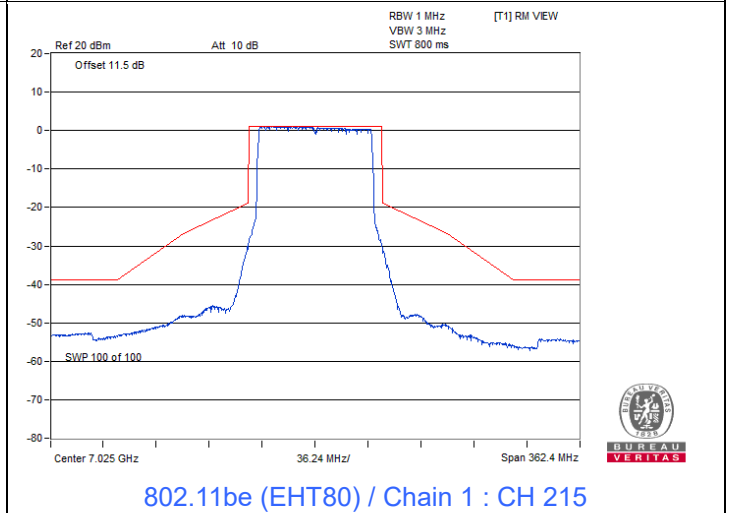
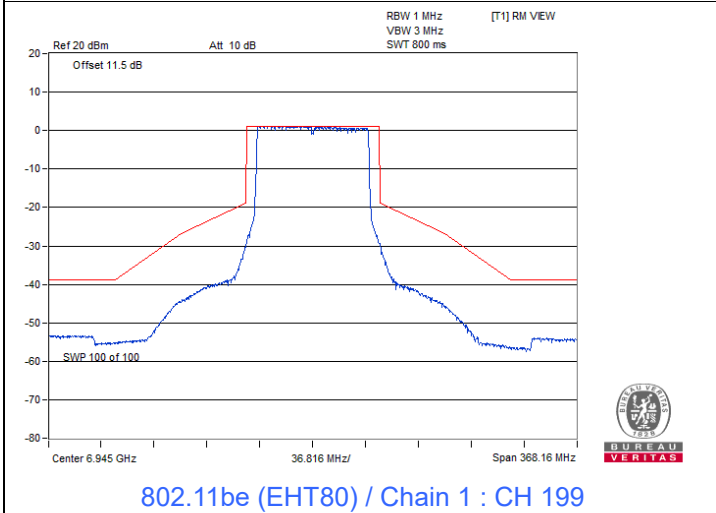
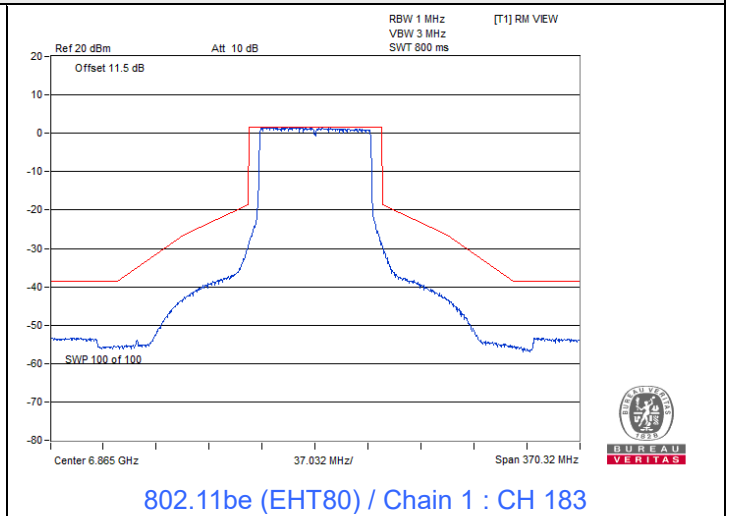
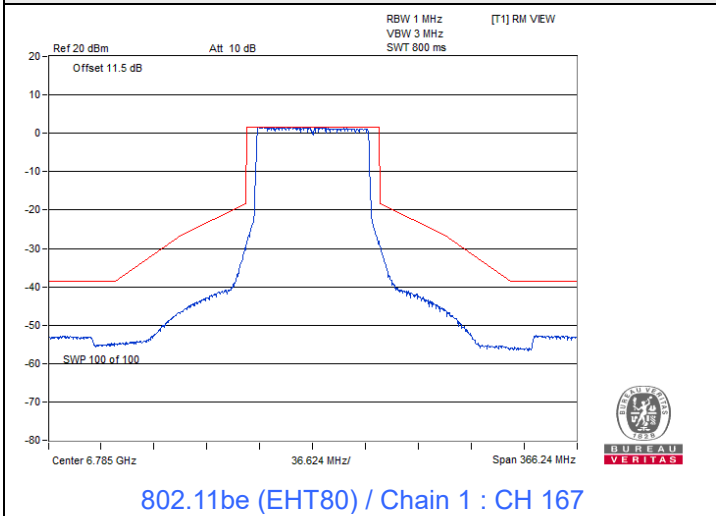
### Spectrum Plot



### Spectrum Plot



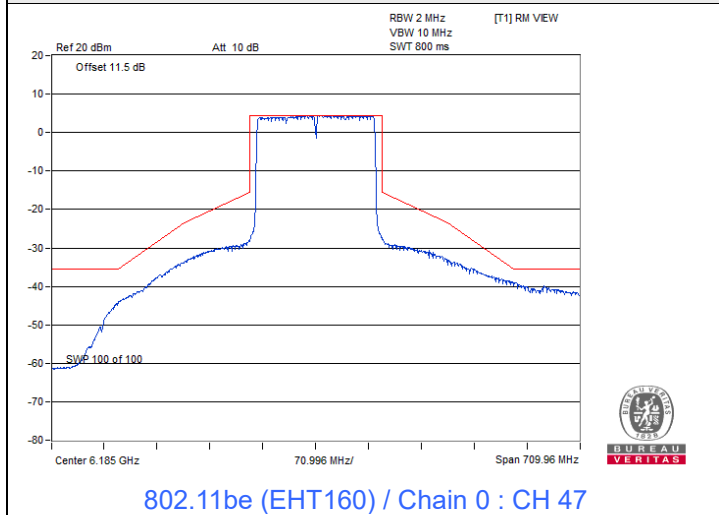
### Spectrum Plot



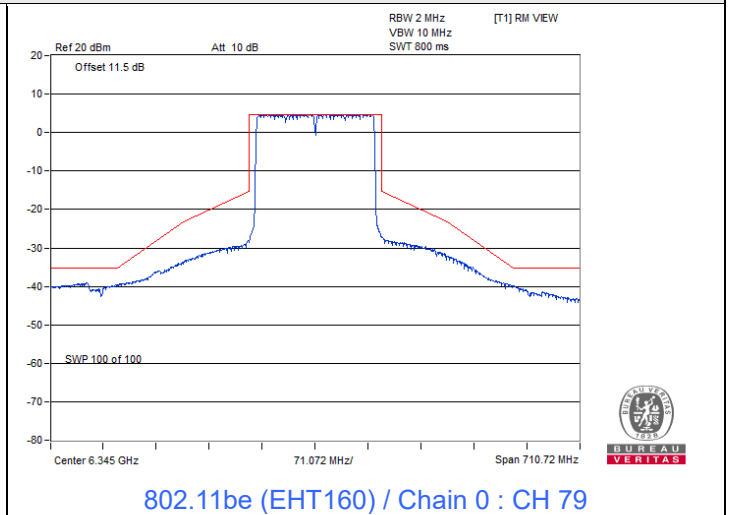


### 802.11be (EHT160)

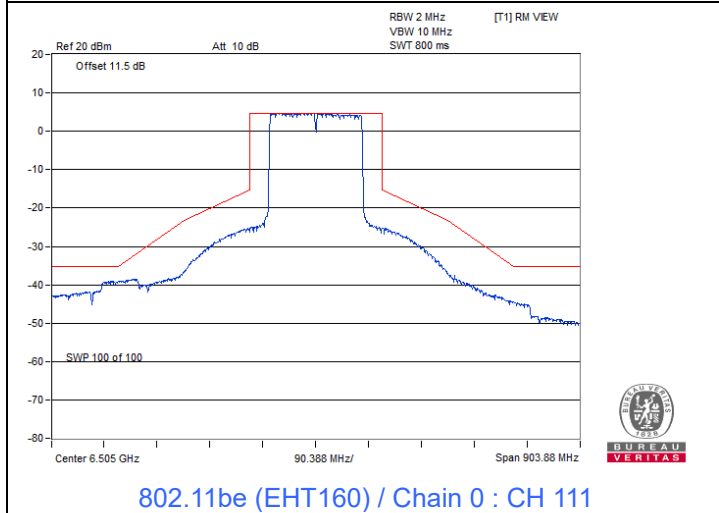
### Spectrum Plot



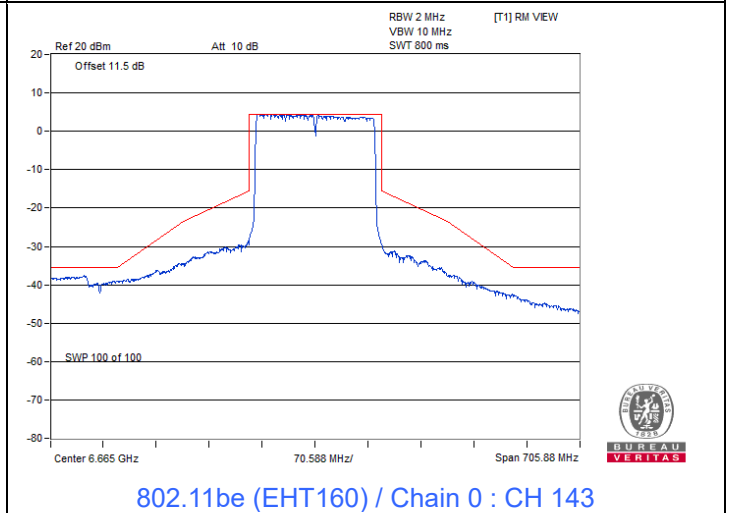
802.11be (EHT160) / Chain 0 : CH 47



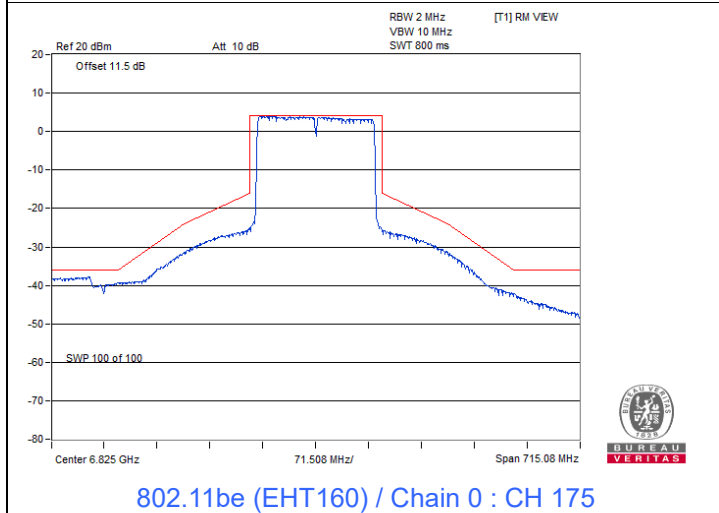
802.11be (EHT160) / Chain 0 : CH 79



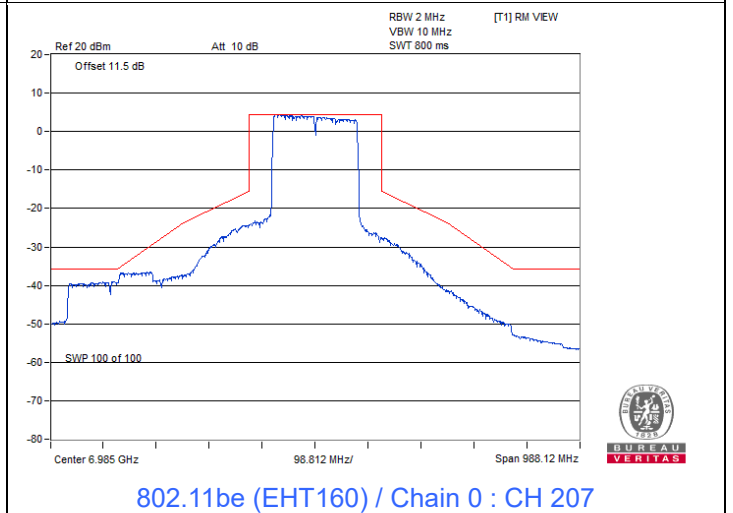
802.11be (EHT160) / Chain 0 : CH 111



802.11be (EHT160) / Chain 0 : CH 143

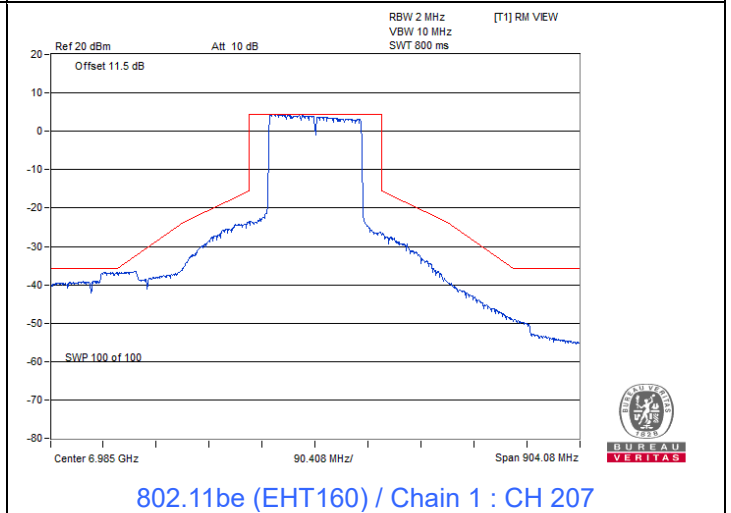
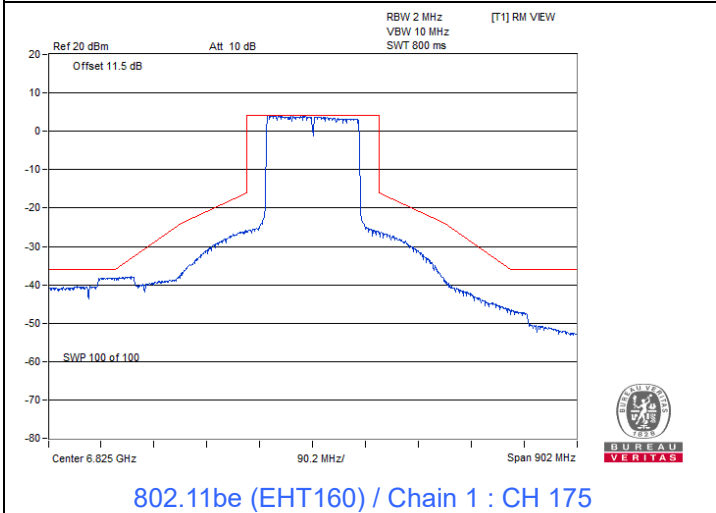
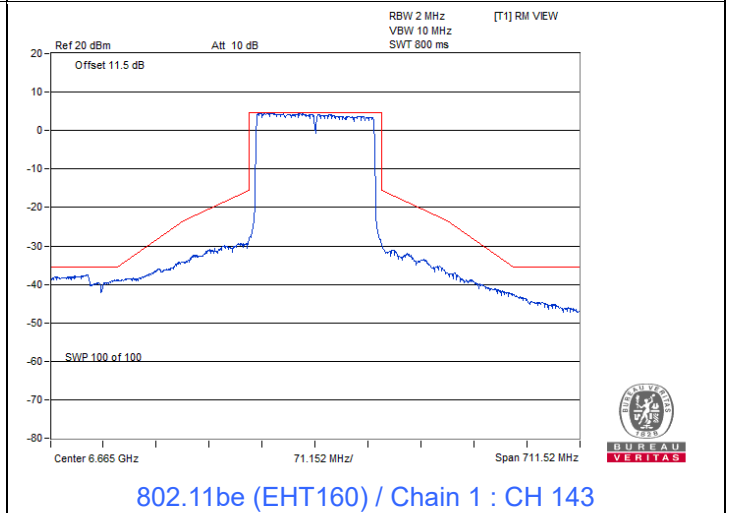
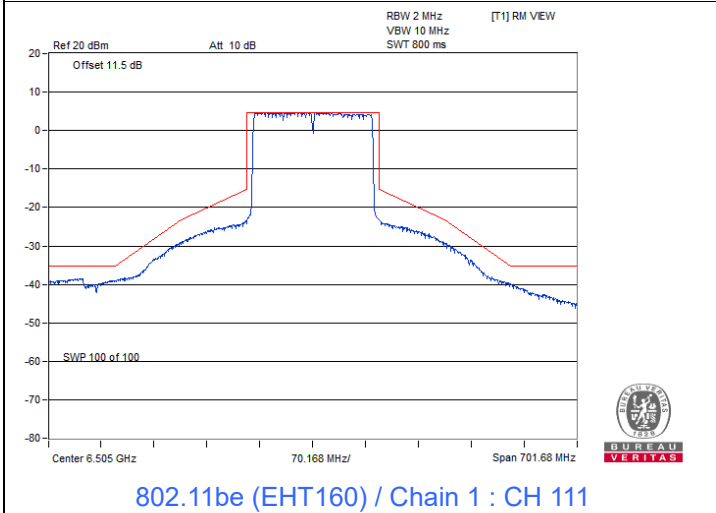
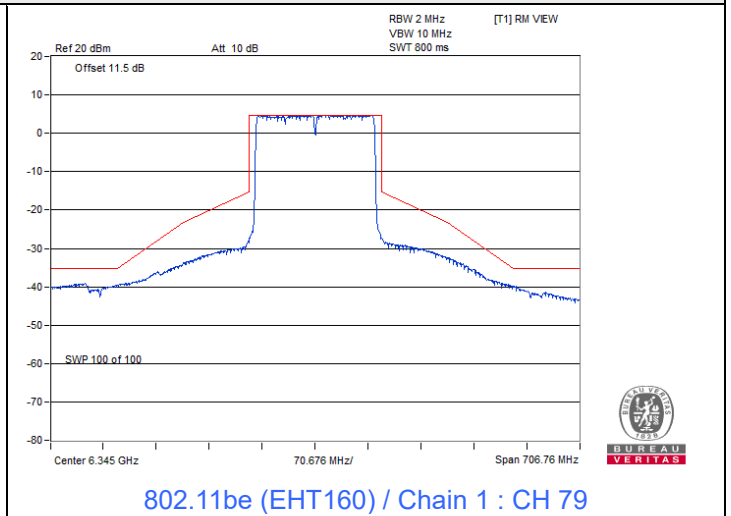
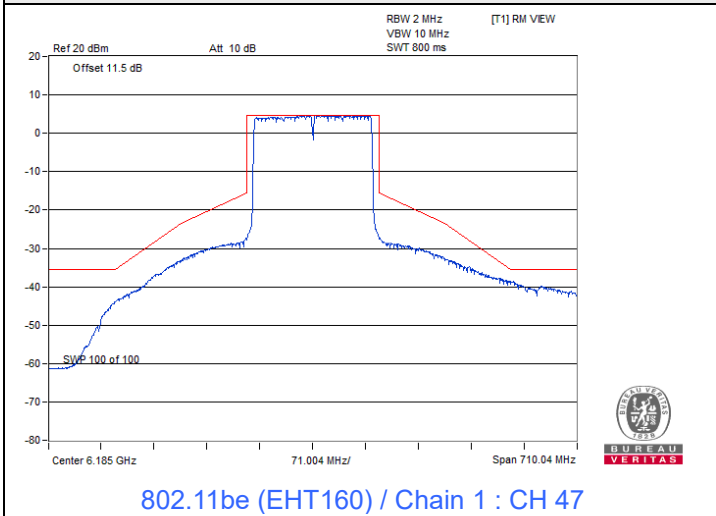


802.11be (EHT160) / Chain 0 : CH 175



802.11be (EHT160) / Chain 0 : CH 207

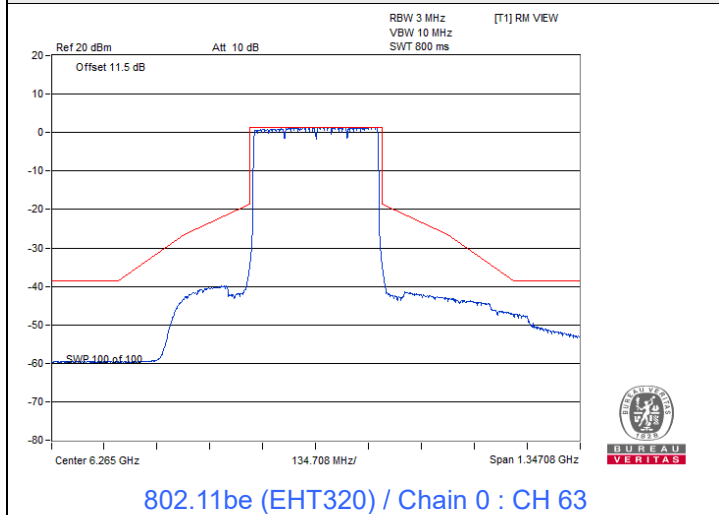
### Spectrum Plot



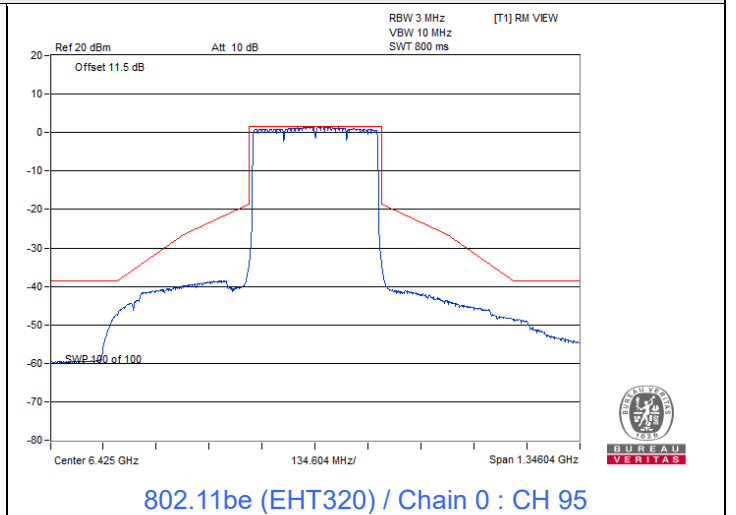


### 802.11be (EHT320)

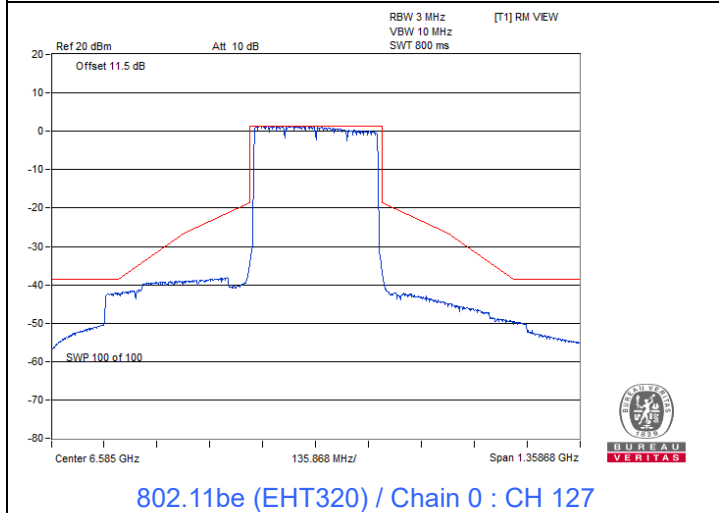
### Spectrum Plot



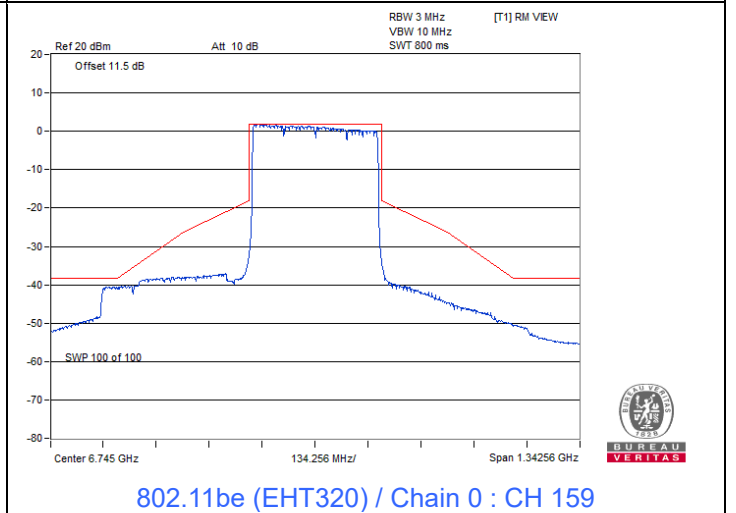
802.11be (EHT320) / Chain 0 : CH 63



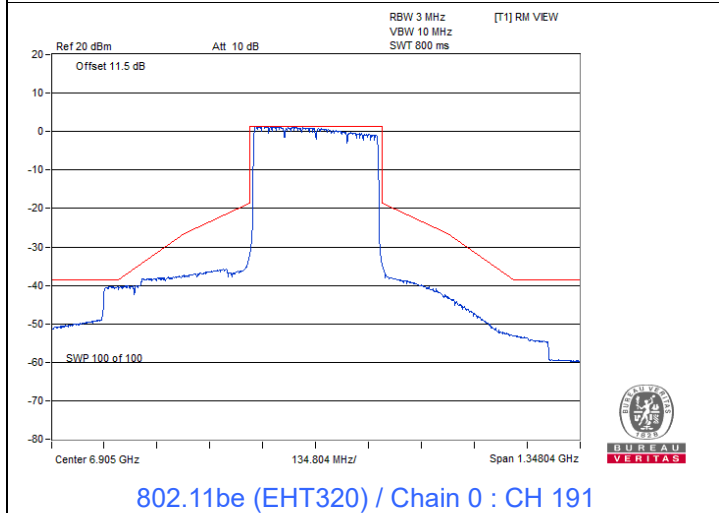
802.11be (EHT320) / Chain 0 : CH 95



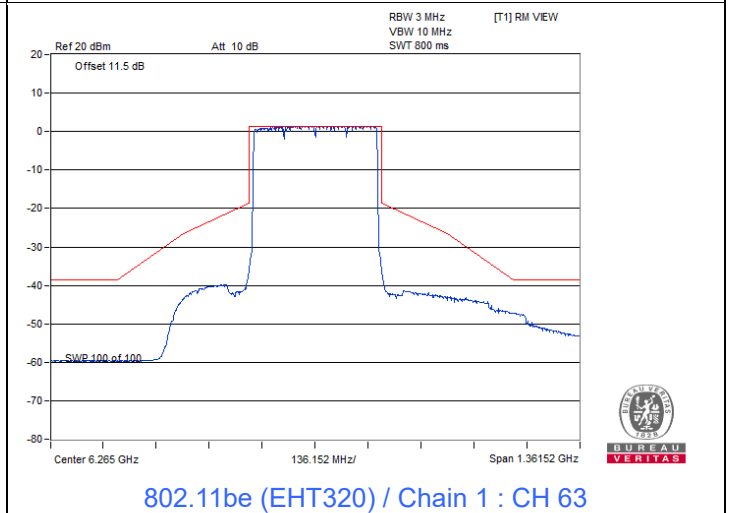
802.11be (EHT320) / Chain 0 : CH 127



802.11be (EHT320) / Chain 0 : CH 159

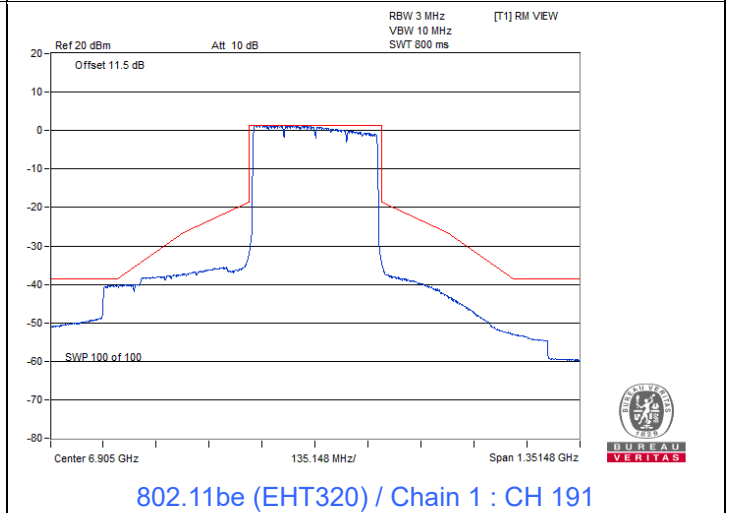
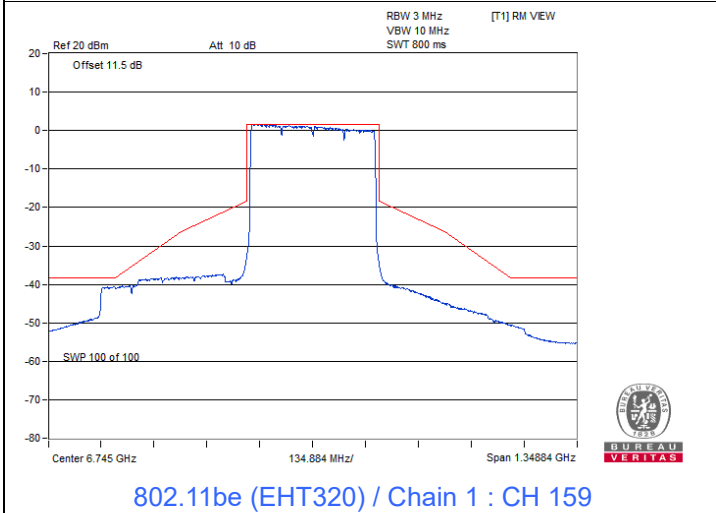
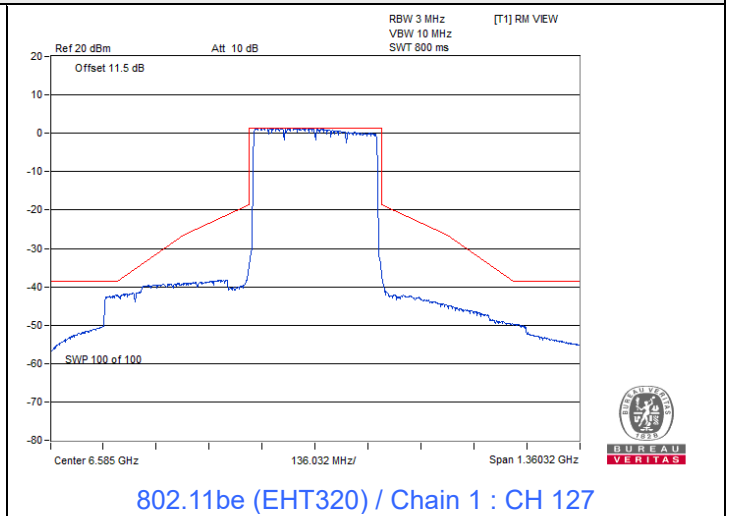
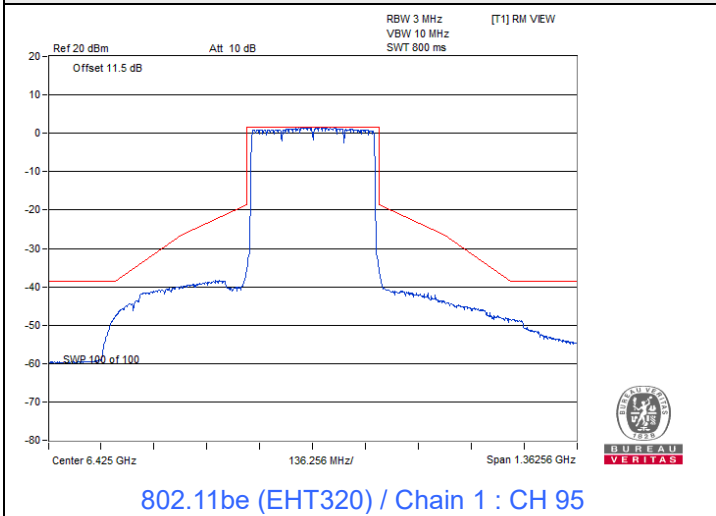


802.11be (EHT320) / Chain 0 : CH 191



802.11be (EHT320) / Chain 1 : CH 63

### Spectrum Plot





## 7.5 Occupied Bandwidth

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang
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### NSS1

#### 802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
33	6115	16.98	17.04
61	6255	16.98	16.98
93	6415	16.98	17.04
97	6435	16.98	16.98
105	6475	17.04	16.98
113	6515	16.98	16.98
117	6535	17.04	17.04
149	6695	16.98	16.92
181	6855	17.04	16.98
185	6875	17.04	16.98
209	6995	16.92	16.92
229	7095	16.98	17.04
233	7115	17.04	16.98

#### 802.11be (EHT20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
33	6115	19.14	19.20
61	6255	19.14	19.14
93	6415	19.14	19.20
97	6435	19.14	19.14
105	6475	19.14	19.14
113	6515	19.14	19.14
117	6535	19.14	19.14
149	6695	19.20	19.14
181	6855	19.14	19.14
185	6875	19.14	19.14
209	6995	19.14	19.14
229	7095	19.20	19.14
233	7115	19.14	19.20

**802.11be (EHT40)**

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
35	6125	38.52	38.52
59	6245	38.52	38.52
91	6405	38.40	38.40
99	6445	38.40	38.40
107	6485	38.52	38.52
115	6525	38.64	38.40
123	6565	38.40	38.52
155	6725	38.40	38.52
179	6845	38.40	38.40
187	6885	38.52	38.40
211	7005	38.40	38.40
227	7085	38.40	38.40

**802.11be (EHT80)**

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
39	6145	78.00	78.00
55	6225	78.00	78.24
87	6385	78.00	77.76
103	6465	77.76	78.00
119	6545	77.76	77.76
135	6625	77.76	77.76
151	6705	77.76	78.00
167	6785	77.76	77.76
183	6865	78.24	77.76
199	6945	78.00	77.76
215	7025	77.76	77.76

**802.11be (EHT160)**

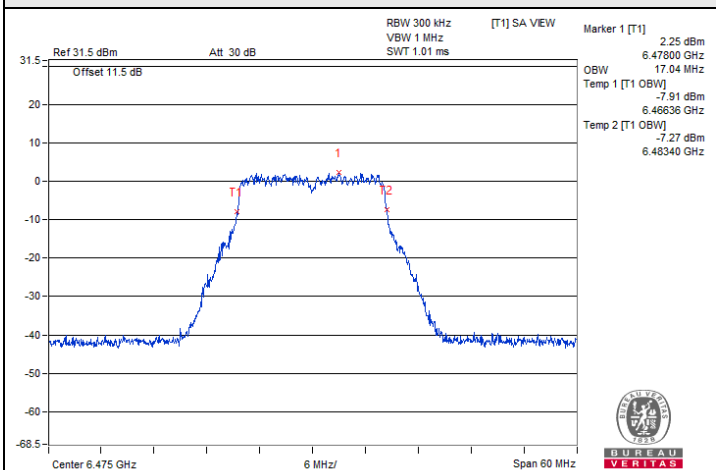
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
47	6185	157.44	157.44
79	6345	157.92	157.92
111	6505	157.92	157.44
143	6665	157.92	157.44
175	6825	157.92	157.92
207	6985	157.44	157.92

**802.11be (EHT320)**

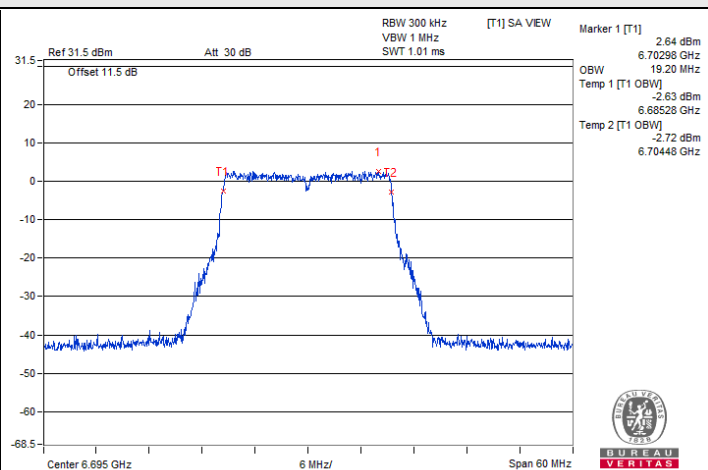
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
63	6265	316.80	316.80
95	6425	317.76	315.84
127	6585	315.84	315.84
159	6745	316.80	315.84
191	6905	315.84	315.84



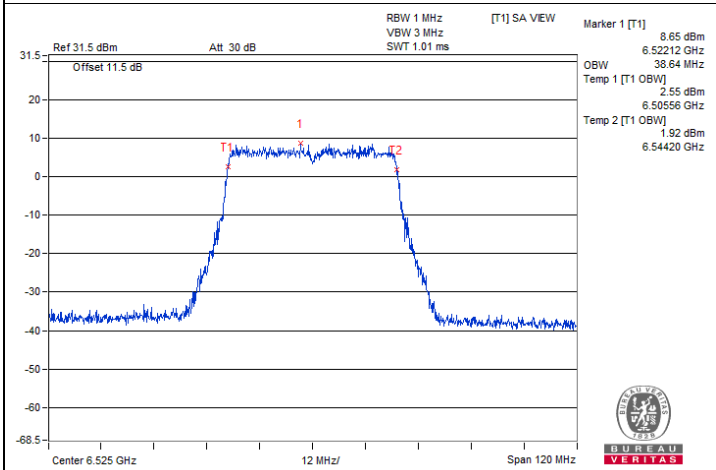
### Spectrum Plot of Maximum Value



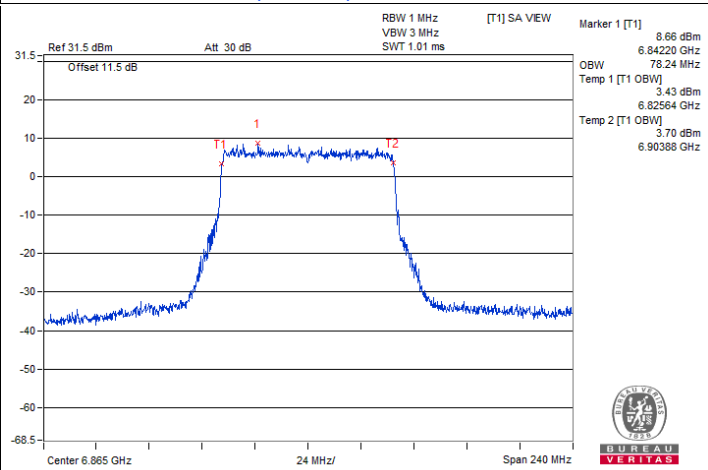
802.11a / Chain 0 : CH 105



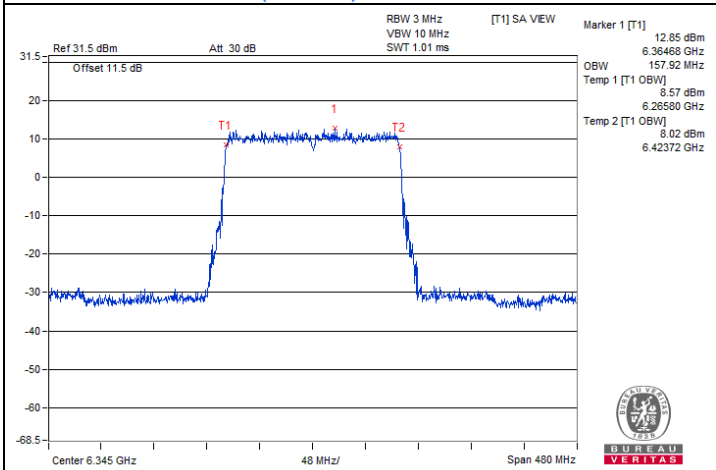
802.11be (EHT20) / Chain 0 : CH 149



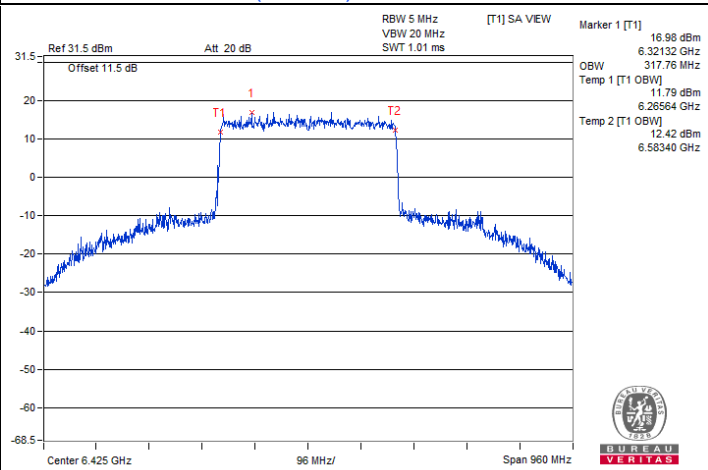
802.11be (EHT40) / Chain 0 : CH 115



802.11be (EHT80) / Chain 0 : CH 183



802.11be (EHT160) / Chain 0 : CH 79



802.11be (EHT320) / Chain 0 : CH 95

## NSS2

### 802.11be (EHT20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
33	6115	19.26	19.14
61	6255	19.14	19.14
93	6415	19.14	19.14
97	6435	19.14	19.14
105	6475	19.14	19.14
113	6515	19.14	19.14
117	6535	19.14	19.14
149	6695	19.08	19.14
181	6855	19.14	19.14
185	6875	19.14	19.14
209	6995	19.08	19.14
229	7095	19.20	19.14
233	7115	19.20	19.20

### 802.11be (EHT40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
35	6125	38.40	38.40
59	6245	38.28	38.40
91	6405	38.40	38.40
99	6445	38.40	38.40
107	6485	38.40	38.40
115	6525	38.40	38.40
123	6565	38.40	38.40
155	6725	38.28	38.40
179	6845	38.40	38.40
187	6885	38.40	38.40
211	7005	38.40	38.40
227	7085	38.40	38.40

**802.11be (EHT80)**

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
39	6145	77.76	77.76
55	6225	77.52	77.76
87	6385	78.00	77.76
103	6465	77.76	77.52
119	6545	77.76	77.76
135	6625	77.76	77.76
151	6705	77.76	77.76
167	6785	77.76	78.00
183	6865	77.76	77.76
199	6945	77.76	77.76
215	7025	77.76	77.76

**802.11be (EHT160)**

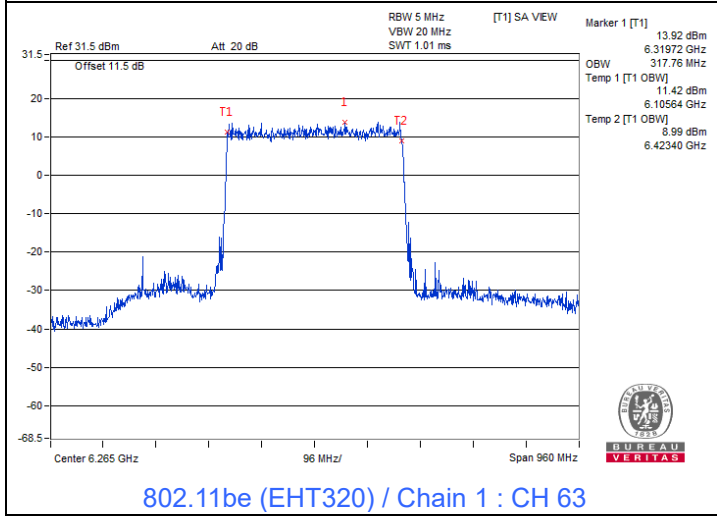
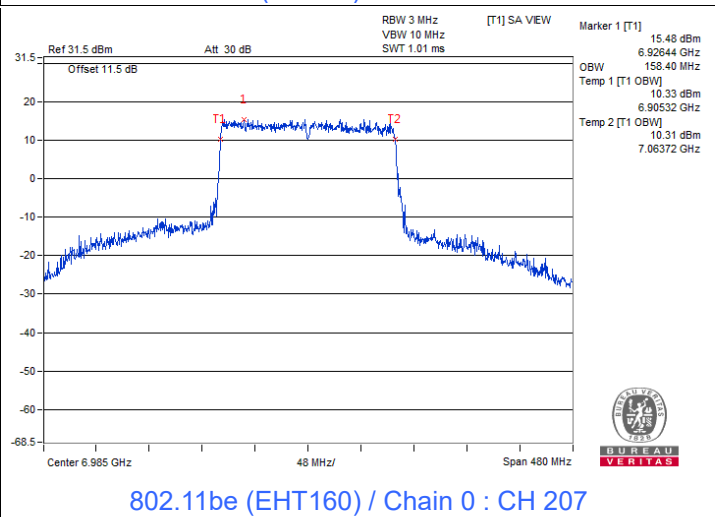
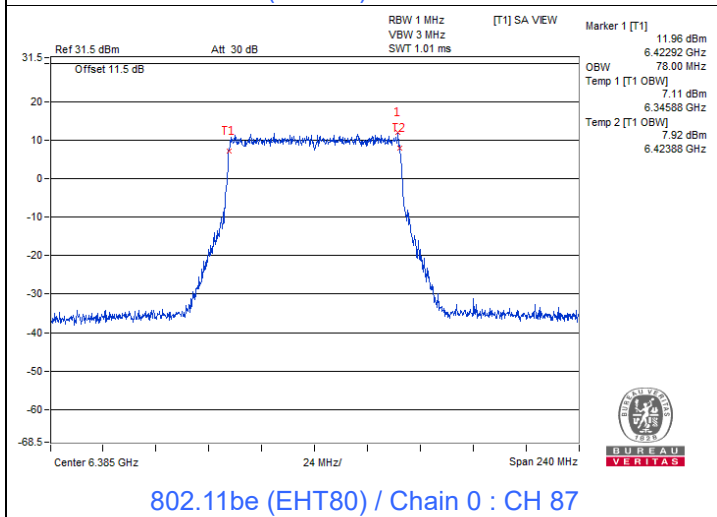
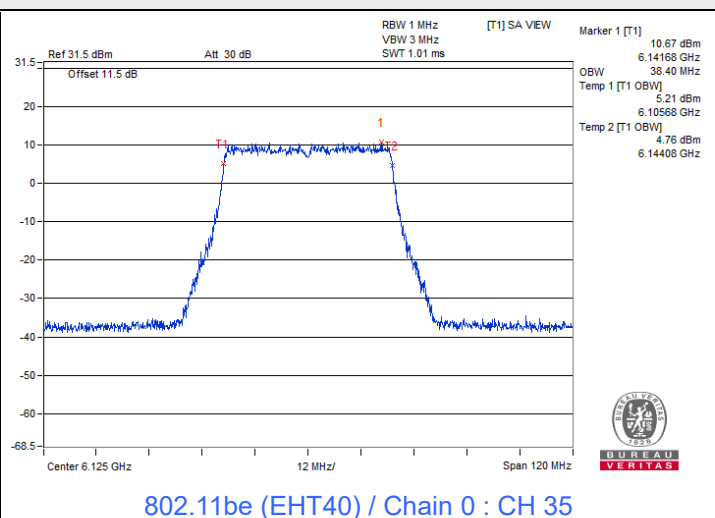
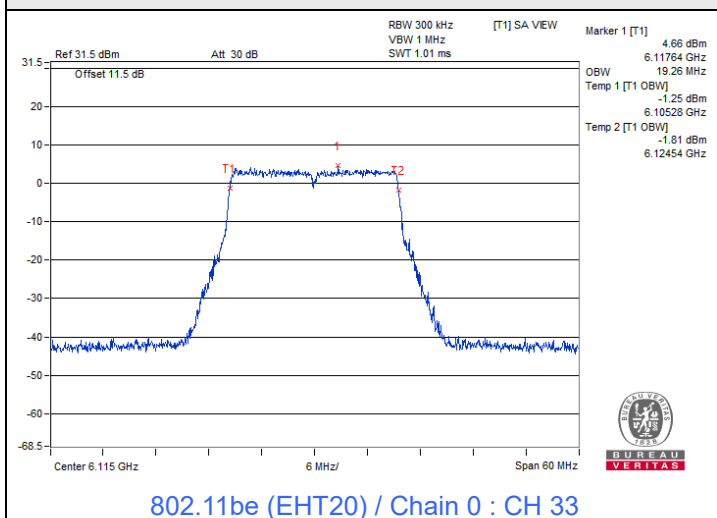
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
47	6185	157.92	157.92
79	6345	157.44	157.92
111	6505	157.92	158.40
143	6665	157.92	157.92
175	6825	157.92	158.40
207	6985	158.40	157.92

**802.11be (EHT320)**

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
63	6265	316.80	317.76
95	6425	316.80	315.84
127	6585	314.88	315.84
159	6745	315.84	315.84
191	6905	314.88	315.84



### Spectrum Plot of Maximum Value



## 7.6 Frequency Stability

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang
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Frequency Stability Versus Temperature									
Operating Frequency: 6115 MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
40	120	6115.0268	Pass	6115.0254	Pass	6115.0278	Pass	6115.0267	Pass
30	120	6115.0107	Pass	6115.0058	Pass	6115.0098	Pass	6115.0098	Pass
20	120	6114.9995	Pass	6115.0027	Pass	6114.9992	Pass	6115.0007	Pass
10	120	6115.0129	Pass	6115.0149	Pass	6115.0133	Pass	6115.0138	Pass
0	120	6114.9716	Pass	6114.9713	Pass	6114.9706	Pass	6114.9727	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 6115 MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result	Measured Frequency (MHz)	Test Result
20	138	6115.0086	Pass	6115.0111	Pass	6115.0079	Pass	6115.0086	Pass
	120	6114.9995	Pass	6115.0027	Pass	6114.9992	Pass	6115.0007	Pass
	102	6114.9941	Pass	6114.9945	Pass	6114.9962	Pass	6114.9926	Pass